

**Enhanced
Automated
Graphical
Logistics
Environment**

**EAGLE DATA CONFIGURATION MANAGEMENT MANUAL
VERSION 8**

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The EAGLE Software Package has become the best of its kind thanks, in large part, to its clients. We would like to take this opportunity to thank all of you for your suggestions, insights and support. In addition, we want to renew our commitment to you, our valued clients.



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SECTION 1



THEORY OF OPERATION

SECTION 1 DATA CONFIGURATION MANAGEMENT SYSTEM THEORY OF OPERATION

1.0 INTRODUCTION

This section describes the Enhanced Automated Graphical Logistics Environment (EAGLE) design for the client server Data Configuration Management product. This application has been developed as a client-server application, using Oracle as the database server.

1.1 CONFIGURATION MANAGEMENT SYSTEM DESIGN

The EAGLE Data Configuration Management System is based on a dual database design. The dual databases provide a method to maintain configuration control while allowing users the freedom to make necessary changes in their LSAR database. By having two databases, the user is able to use a Working Database to see live data and make required changes while not disturbing the Released Database which houses the final approved data. Any deliverable manuals or reports generated from the database should be run from the Released Database to ensure the approved and validated configuration is used.

The Working Database and the Released Database have matching schema. The differences between the two databases are:

1. who has access to the databases
2. who is able to modify the databases
3. what data is contained in the databases

Data Configuration Management is controlled by End Item in the Working Database. A column in the ZENDITEM Table identifies whether the End Item is under configuration control or not. This column is used by the application to determine whether or not to perform the configuration control checks. New programs will probably not implement configuration control until data is released to customers. Once data is released it is envisioned that the End Item will be put under configuration control.

1.1.1 Working Database

The Working Database is an Oracle database containing the live or in-work LSAR data. This database is where the logistics engineers do all of their work. Each record that the logistics engineer modifies is checked to see if it is under configuration control before it is saved. If the record is under configuration control, the user is notified and prompted for a logistic change authority (LCA) in order to save the changes to the data record. A general logistic change authority code ("DATA FIX") is provided to cover miscellaneous data fixes and is used as the

default LCA. When users are prompted for the LCA code, they are also given the option to add comments documenting the reason for the change. When the data is saved, a change history record is established identifying the user id of the user making the change, the current date/time stamp, the LCA, the data before the change was made, the data after the change was made, and any comments added.

Each record in the Working Database can be associated with an approval status. There are six approval status codes available: Unapproved, Approved, Deleted, Deleted Approved, Released and Inserted. The Unapproved status code indicates that the data record is in-work. Records in the database that do not have a status code are considered Unapproved as well as records that are explicitly marked as Unapproved. The Approved status code indicates that the data record has been reviewed and approved for transfer to the Released Database. Data in this category has been completed by the logistics engineer and has been reviewed for quality control. The Deleted status code indicates that the data record has been deleted from the Working Database and is waiting for approval before it will be removed from the Released Database. The Deleted Approved status code indicates that the record has been approved for deletion from the Released Database. The Released status code indicates that the data record is in the Released Database and is under configuration control. Data in this category cannot be changed unless it is documented with an LCA code for tracking purposes. Once data with a Released or Approved status code is changed, the associated code is changed to Unapproved.

When a data record is changed to or from the Approved or Released status code, it is documented in the Change History Tables. Depending on the type of data configuration control the user chooses for the End Item, an LCA code may be required during the change documentation process. More details on the change process will be covered in sections 1.1.4 through 1.1.6.

NOTE: Triggers must be left on at all times; otherwise the integrity of the configuration management system is in jeopardy.

1.1.2 Released Database

The Released Database is an Oracle database containing approved and validated LSAR data. Access to this database should be restricted since it is under configuration control. The majority of changes made to this database are done by an approved Quality Control Administrator (referred to from here on as the Approval Administrator) using the Approval Application. The logistics engineer should not make changes to this database. Changes that the logistics engineer makes in the Working Database are coordinated with the Approval Administrator for approval. Upon Approval, changes are merged into the Released Database by the Release Administrator.

Most reports that will be delivered to the customer, including the standard LSAR Reports as well as Tech Manuals, IPBs, and RPSTLs should be run on the Released Database. The LSA-152 and LSA-036 should be run on the Working Database because these reports can update the database and the data they affect would have to be reviewed for quality before being released.

Customers may be granted access to the Released Database for review and commenting on the LSAR data. If it is deemed necessary, customers can be granted access to the Working Database; however, it is not recommended since the data is in-work and can be incomplete at the time the customer is reviewing it.

Access to the Released Database is restricted since it is under configuration control; therefore, users will be granted the EAGLE_CUST_ROLE which will allow them read only access to the LSAR data but write access to add comments using the standard EAGLE Comment Finder. The Navigator on the Released Database can be tailored to allow limited Reporting abilities for regular users.

1.1.3 User Roles

There are five EAGLE User Roles used by the EAGLE Data Configuration Management System. One or more of these roles can be assigned to a regular user. These roles are:

- EAGLE_USER_ROLE - (Regular EAGLE User)
- EAGLE_CUST_ROLE - (Customer Comments/Remarks User)
- EAGLE_READONLY_ROLE - (Read-Only User)
- EAGLE_APPROVAL_ROLE - (Approval/Quality Check User)
- EAGLE_RELEASE_ROLE - (Working/Release Control User)

1.1.3.1 EAGLE User Role

A user having the EAGLE_USER_ROLE can perform the following:

- User Can Use Entire EAGLE Application
 - User Can View All Data Based on Select Ownership ID
 - User Can Edit All Data Based on Ownership ID
- User Can Use Reviewer Application (Restricted Menu Options)
 - User Can Add Comments and Remarks
 - User Can Edit/View and Analyze Data
 - User Cannot Change Approval Status of Records
- User Cannot Release Data From the Working Database

1.1.3.2 Customer User Role

A user having the EAGLE_CUST_ROLE can perform the following:

- User Can Use Entire EAGLE Application
 - User Can View All Data Based on Select Ownership ID
- User Can Use Reviewer Application (Restricted Menu Options)
 - User Can Add Comments and Remarks
 - User Can View and Analyze Data
 - User Cannot Change Approval Status of Records
- User Cannot Release Data From the Working Database

1.1.3.3 Read Only User Role

A user having the EAGLE_READONLY_ROLE can perform the following:

- User Can Use Entire EAGLE Application
 - User Can View All Data Based on Select Ownership ID
- User Can Use Reviewer Application (Restricted Menu Options)
 - User Can View and Analyze Data
 - User Cannot Add Comments or Responses to the Database
 - User Cannot Change Approval Status of Records
- User Cannot Release Data From the Working Database

1.1.3.4 EAGLE Approval Role

A user having the EAGLE_APPROVAL_ROLE can perform the following:

- User Can Use Reviewer Application
 - User Can Change Approval Status of Records
 - User Can View and Analyze Data
 - User Can Add Comments and Remarks
- User Can Use Entire EAGLE Application
 - User Can View All Data Based on Security ID
 - User Can Edit Data Only If Granted EAGLE_USER_ROLE and appropriate Ownership ID
- User Cannot Release Data From the Working Database

1.1.3.5 EAGLE Releaser Role

A user having the EAGLE_RELEASER_ROLE

- User Can Use Reviewer Application
 - User Can View and Analyze Data
 - User Can Add Comments and Remarks
 - User Cannot Change Approval Status of Records
- User Can Use Entire EAGLE Application
 - User Can View All Data Based on Security ID
 - User Can Edit Data Only If Granted EAGLE_USER_ROLE and appropriate Ownership ID
- User Can Move Approved Data to Released Database

1.1.3.6 EAGLE Data Alignment Role

A user having the EAGLE_DCM_DA_ROLE can perform the following:

- User Can Use Entire EAGLE Application
 - User Can View All Data Based on Select Ownership ID
 - User Can Edit All Data Based on Ownership ID
 - User Can Edit Approved/Released Data – Automatic LCA assignment followed by unapproval/approval of record
- User Can Use Reviewer Application (Restricted Menu Options)
 - User Can Add Comments and Remarks
 - User Can Edit/View and Analyze Data
 - User Cannot Change Approval Status of Records
- User Cannot Release Data From the Working Database

1.1.4 Configuration Control Options

Initially the EAGLE Data Configuration Management System consisted of only one type of data configuration control; however, due to customer requirements, we have added two additional data configuration control options. The three data configuration control options are:

- Configuration Control
- Configuration Control with Continuous Tracking
- Configuration Control with Continuous Tracking and Insert Control

The type of data configuration control is determined by the selection in the End Item Defaults Window as shown in Figure 7.

The following paragraphs will discuss the theory for each data configuration control option.

1.1.4.1 Configuration Control

The Configuration Control option will be called Regular Control throughout this manual in order to distinguish it from the other types of Configuration Control.

Regular Control is enforced on a Working Database as described in Section 1.1.1. Five of the six approval status codes described in Section 1.1.1 are available for Regular Control: Unapproved, Approved, Deleted, Deleted Approved, and Released.

When a data record is changed to or from the Approved or Released status code, it is documented in the Change History Tables. The difference between changing a record with an Approved status code versus a record with a Released status code is in the user interface. When a change is made to a data record under the Released status code, user interaction is required; however, when a change is made to a data record under the Approved status code, the user is only notified of the approval status. Since an Approved status code is essentially not under configuration control, the user is given a message box as a warning that the approval process has been performed on the record being modified. This allows the user to determine if they want to “undo” the approval process. If the user chooses to continue and save the data change(s), the changes are documented in the Change History Table with the designated default logistic change authority code (or selected LCA) and no comment.

Changing a data record with a Release status code requires an additional step by the user since the data is under configuration control. When a user tries to save a change to a Released data record, they are notified with a response window that the item is under configuration control and they are prompted for a logistic change authority code and optional comments as to why the record is being changed. During this notification process the user can decide not to make the change or they can select the appropriate logistic change authority code to document why the change was made.

The main advantage of using the Regular Control is it is the least intrusive to users making changes. Once data has been released to the Released Database, it is still under control by

requiring an LCA prior to making any data changes to the customer, but the LCA is only required the first time the record is changed. Subsequent changes to the record will not require an LCA unless the Record is approved and Released to the Released Database for the next customer release.

1.1.4.2 Configuration Control with Continuous Tracking

The Configuration Control with Continuous Tracking option will be called Continuous Tracking throughout this manual in order to distinguish it from the other types of Configuration Control. Continuous Tracking is enforced on a Working Database as described in Section 1.1.1. Five of the six approval status codes described in Section 1.1.1 are available for Continuous Tracking: Unapproved, Approved, Deleted, Deleted Approved, and Released.

The Continuous Tracking option performs the same data configuration control that the Regular Configuration Control option does with an additional continuous tracking feature. The continuous tracking feature is used to track **all** changes made to records that have been in the Released Database. With Regular Configuration Control, a change to a record with Released status becomes Unapproved and any subsequent changes to the record are not recorded against an LCA until the record gets approved and released to the Released Database. With the continuous tracking feature, the record with Released status becomes Unapproved, however, all subsequent changes to the record are recorded against an LCA. Continuous tracking for a record starts when the record is in Released status and becomes Unapproved.

The main advantage of the Continuous Tracking option is once data has been released to the customer, **all** changes made to the Released records can be tracked by LCAs for tracing purposes.

1.1.4.3 Configuration Control with Continuous Tracking and Insert Control

The Configuration Control with Continuous Tracking and Insert Control option will be called Insert Control throughout this manual in order to distinguish it from the other types of Configuration Control. Insert Control is enforced on a Working Database as described in Section 1.1.1. All six of the approval status codes described in Section 1.1.1 are available for Insert Control: Unapproved, Approved, Deleted, Deleted Approved, Released, and Inserted.

The Insert Control option performs the same data configuration control as the Continuous Tracking option does with an addition of tracking every new record that is inserted into the database. When a record is inserted into a database, the user is prompted for an LCA and it is tracked in the changed history. The Insert Control option provides continuous tracking for a record when the record is inserted or when the record is in Released status and becomes Unapproved.

The Insert Control option would generally not be used during the early stages of a project because every time a new record was inserted into the database an LCA would be required. However, once the project goes live, the user may want all additions tracked against the appropriate change authority in addition to all changes made to the Released records.

1.1.5 Approval Checking Process for Data Changes

When a user changes data in EAGLE and presses the Save button, the database performs an approval checking process when a data configuration control option is chosen. The first check of the approval process is to see if the table is under configuration control. If the table is not under configuration control, the data change is executed with no additional approval checking. However, if the table is under configuration control, the database gets the status of the data record being changed to determine what should happen next. The next step in the process is slightly different for each data configuration management option so each one is briefly described in Sections 1.1.4.1, 1.1.4.2, and 1.1.4.3.

Figure 1, Figure 2, and Figure 3 illustrate the approval checking process that is performed when data is saved in the Working Database for each of the data configuration management options. After the user presses the Save button in EAGLE, the database checks to see if there are any errors in the data and will raise the appropriate database error message to the EAGLE client. EAGLE will handle the error raised based on the message. If the error is not a data configuration management error, the user will be notified and allowed to make the data changes required to fix the error. This is consistent with the way the EAGLE application operates without a configuration management option chosen.

The "--CONFIGURATION CONTROL--A" error message will cause EAGLE to invoke a message box that notifies the user that the data has been approved and will allow them the option to continue saving the data. This error message denotes that the data record being modified has been previously approved for transfer to the Released Database, but is not under configuration control. Therefore, the user is not prompted for the Logistic Change Authority code and the designated default (or the selected LCA) is used and the data is automatically saved to the database and documented in the history tables.

The "--CONFIGURATION CONTROL--R" error message denotes that the data record being modified is under configuration control in the Released Database and the user is required to give a LCA code and optionally a reason for the data change. The "--CONFIGURATION CONTROL--R" error message will cause EAGLE to invoke a response window that notifies the user that the data is under configuration control and prompts the user to enter the reason the data is being changed with the corresponding LCA code. The LCA code will default to the last LCA code used, but the user may choose a different one. If the user decides not to save the data at this point, they can choose the Cancel button to return to the EAGLE editing window. If the user decides to save the data, they can choose the Save button to save the data to the database and document the change to history.

The "--CONTINUOUS CONFIGURATION CONTROL--A" error message denotes that the data record being modified is under Continuous Tracking and it has been approved. This message will cause EAGLE to invoke a response window that notifies the user that the data is under configuration control and prompts the user to enter the reason the data is being changed with the corresponding LCA code. The LCA code will default to the last LCA code used, but the user may choose a different one. If the user decides not to save the data at this point, they can choose the

Cancel button to return to the EAGLE editing window. If the user decides to save the data, they can choose the Save button to save the data to the database and document the change to history.

The "--CONTINUOUS CONFIGURATION CONTROL--I" error message denotes that the data record being inserted is under Continuous Tracking and Insert Control. This message will cause EAGLE to invoke a response window that notifies the user that the data is under configuration control and prompts the user to enter the reason the data is being added with the corresponding LCA code. The LCA code will default to the last LCA code used, but the user may choose a different one. If the user decides not to save the data at this point, they can choose the Cancel button to return to the EAGLE editing window. If the user decides to save the data, they can choose the Save button to save the data to the database and document the change to history.

The "--CONTINUOUS CONFIGURATION CONTROL--R" error message denotes that the data record being modified is under configuration control in the Released Database and the user is required to give a LCA code and optionally a reason for the data change. This message will cause EAGLE to invoke a response window that notifies the user that the data is under configuration control and prompts the user to enter the reason the data is being changed with the corresponding LCA code. The LCA code will default to the last LCA code used, but the user may choose a different one. If the user decides not to save the data at this point, they can choose the Cancel button to return to the EAGLE editing window. If the user decides to save the data, they can choose the Save button to save the data to the database and document the change to history.

1.1.5.1 Regular Configuration Control - Data Change Flow

When the Regular Configuration Control option is chosen, the following steps occur when the user chooses to save their data changes in EAGLE.

The database gets the status of the data record being changed. If the status is:

- Unreleased:
The EAGLE Client will save the data if it is valid
- Approved:
The EAGLE Client will display the Approval Warning Message Response Window
- Released:
The EAGLE Client will display the LCA Response Window for the Required LCA

Figure 1 illustrates the approval checking process that is performed when data is saved in the Working Database with the Regular Configuration Control option chosen.

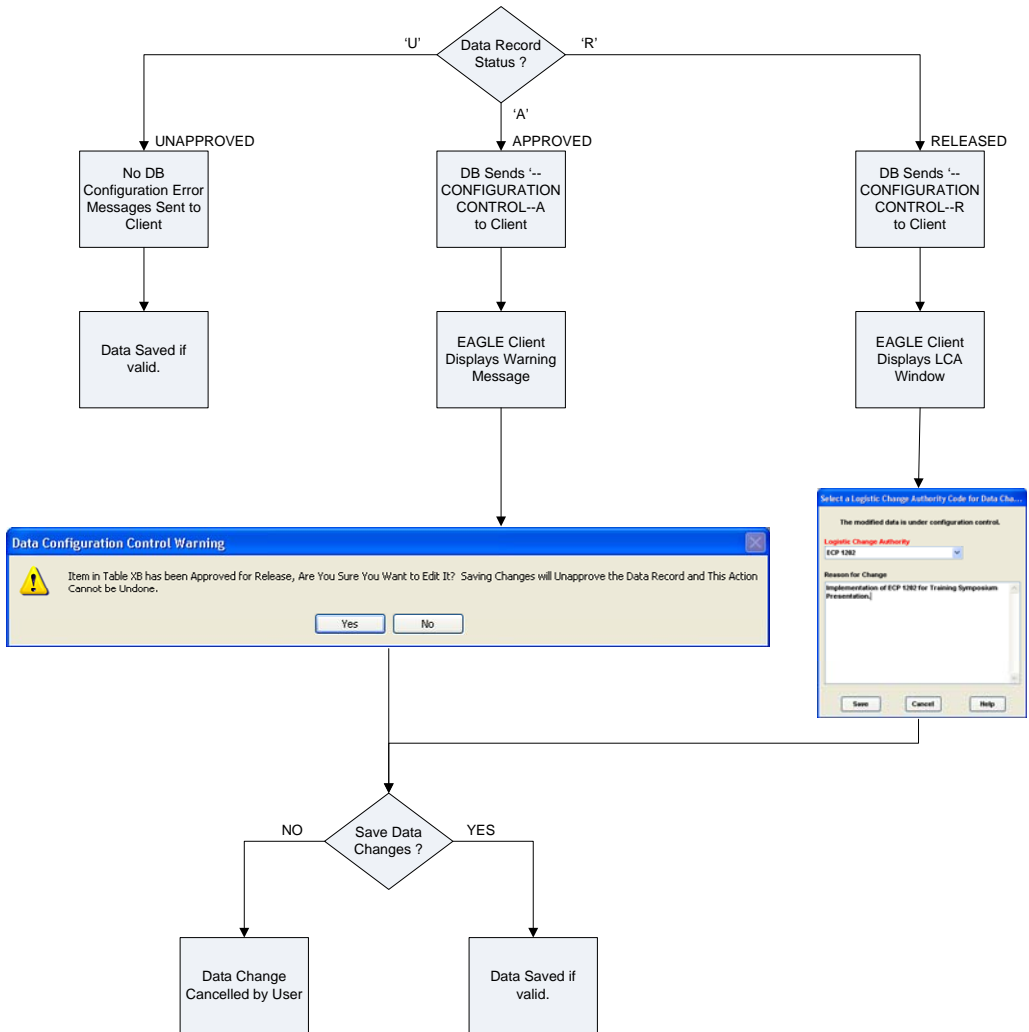


Figure 1. Data Change Flow in a Working Database under Regular Configuration Control.

1.1.5.2 Continuous Tracking - Data Change Flow

When the Continuous Tracking option is chosen, the following steps occur when the user chooses to save their data changes in EAGLE.

The database gets the status of the data record being changed. If the status is:

- Unreleased without continuous control flagged on the record:
The EAGLE Client will save the data if it is valid
- Approved without continuous control flagged on the record:
The EAGLE Client will display the Approval Warning Message Response Window
- Unreleased with continuous control flagged on the record:
The EAGLE Client will display the LCA Response Window for the Required LCA
- Approved with continuous control flagged on the record:
The EAGLE Client will display the LCA Response Window for the Required LCA
- Released:
The EAGLE Client will display the LCA Response Window for the Required LCA

Figure 2 illustrates the approval checking process that is performed when data is saved in the Working Database with the Continuous Tracking option chosen.

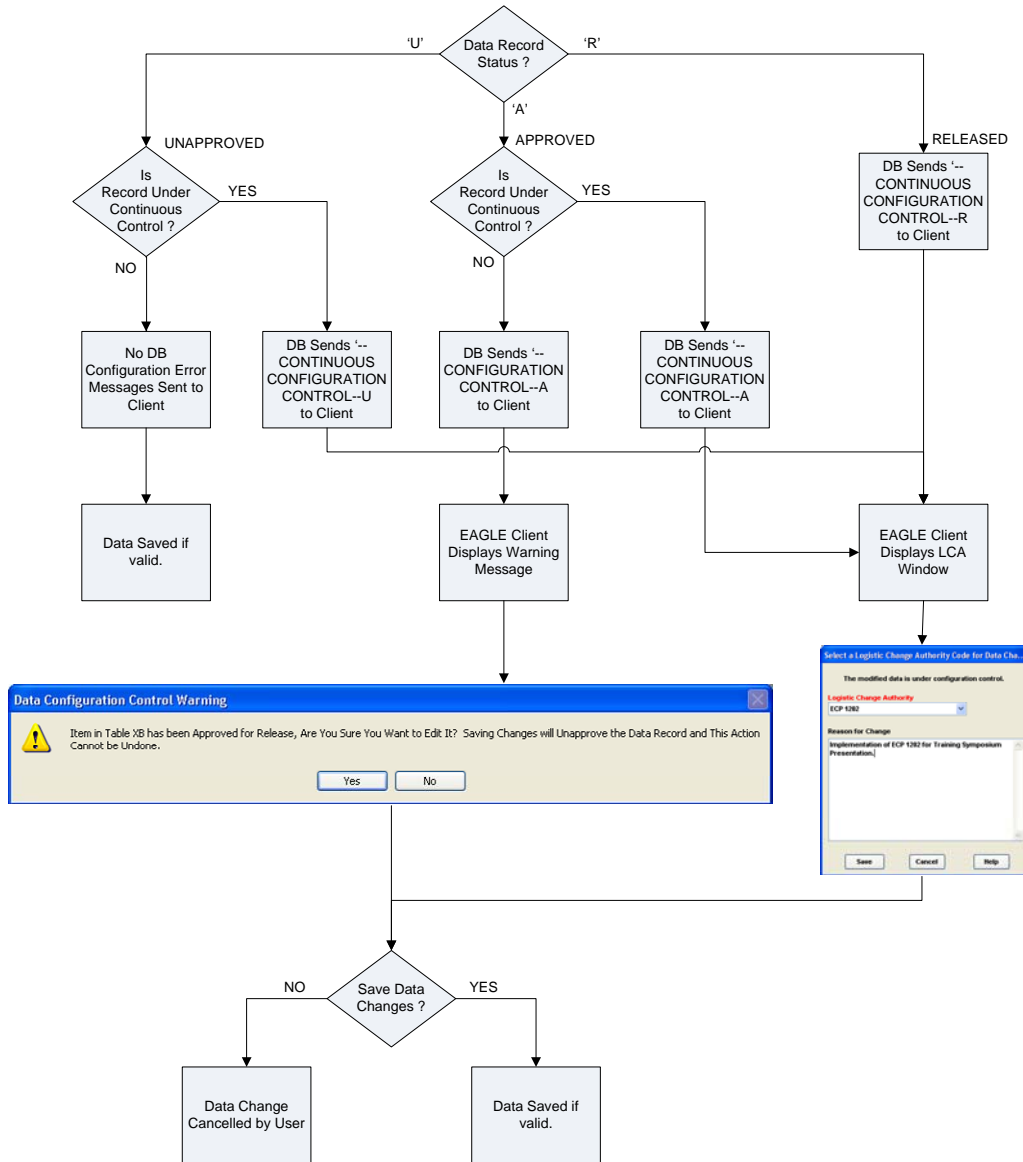


Figure 2. Data Change Flow in a Working Database under Continuous Control.

1.1.5.3 Insert Control - Data Change Flow

When the Insert Control option is chosen, the following steps occur when the user chooses to save their data changes in EAGLE.

The database gets the status of the data record being changed. If the status is:

- Unreleased without continuous control flagged on the record:
The EAGLE Client will save the data if it is valid
- Approved without continuous control flagged on the record:
The EAGLE Client will display the Approval Warning Message Response Window
- Unreleased with continuous control flagged on the record:
The EAGLE Client will display the LCA Response Window for the Required LCA
- Approved with continuous control flagged on the record:
The EAGLE Client will display the LCA Response Window for the Required LCA
- Inserted:
The EAGLE Client will display the LCA Response Window for the Required LCA
- Released:
The EAGLE Client will display the LCA Response Window for the Required LCA

Figure 3 illustrates the approval checking process that is performed when data is saved in the Working Database with the Insert Control option chosen.

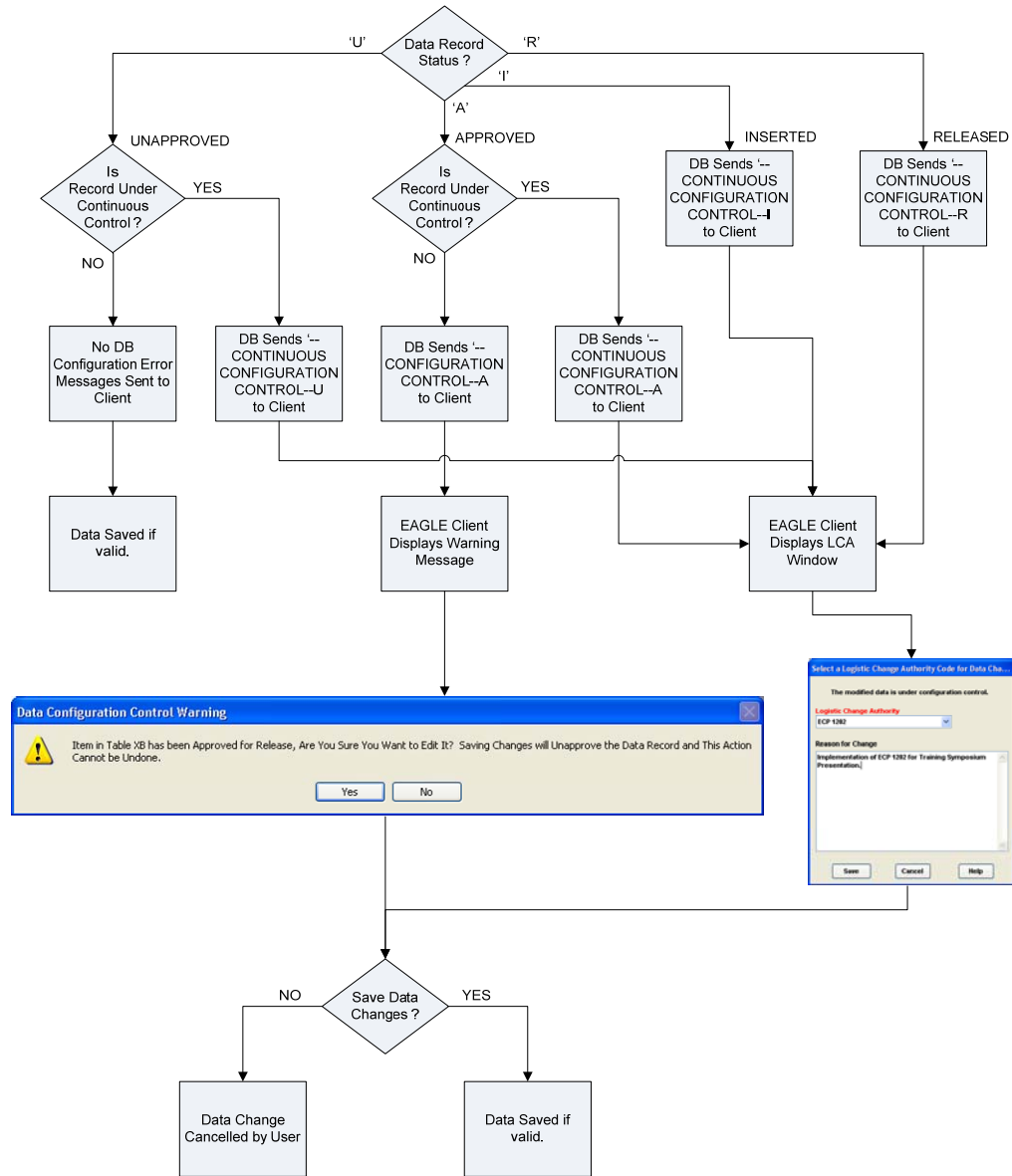


Figure 3. Data Change Flow in a Working Database under Insert Control.

1.1.6 Approving Data

The system provides entry points for approving data based on the top level LSAR disciplines. The system entry points are:

- End Item Maintenance
- LCN Maintenance (X & A Tables)
- Operations Maintenance (A Tables)
- Reliability and Maintainability (B Tables)
- Task Analysis (C Tables)
- Support Equipment (E Tables)
- Unit Under Test (U Tables)
- Facilities (F Tables)
- Personnel (G Tables)
- Provisioning (H Tables, ZA & ZB for 00-60)
- Transportation (J Tables)
- Data Module Review
- Illustrated Parts Breakdown/Repair Parts and Special Tools List (ZIPB Tables)
- Technical Manual (XI Table and ZTM Tables)

Items can be approved/unapproved at a main level listed above, in which case every record for the table and every record for every child table underneath the indicated level is also approved/unapproved. Alternatively, individual parent records (not ALL records at a main level) can be approved/unapproved along with their child records. Or, specific records (not including child records) can be approve/unapproved.

1.1.7 Releasing Data

Transfer of data from the Working Database to the Released Database is accomplished through a direct migration process. When a user with Release Role authority releases data, the Working Database is scanned for release candidates. Data records in the Working Database are release candidates if one of the following is true:

1. The data record is in a table that is not included in the ZCONTROL Table. These records are automatically candidates for the Released Database since they are not under configuration control and the data in the Working Database is considered the best source.
2. Records that are marked as approved status (“A”) in the ZAPPRVSTAT Table.
3. Records that are marked as approved deleted status (“D”) in the ZAPPRVSTAT Table.

The first step for updating data in the Release Database is to delete the data being transferred from the Released Database based on the “D” and “A” status records. For example, if the Working Database has a record changed at the End Item Level, an End Item Level delete will be performed on the Released Database first and then the new data from the Working Database will be loaded. If the Released Data being transferred is at the Task Level, a Task Level delete will be performed first and then the task data from the Working Database will be loaded. Note that during the transfer from the Working Database to the Released Database, there can be multiple levels of data being transferred, so the Data Release Application will determine what data needs to be deleted before the Release Data is moved. This takes care of synchronizing data between the Working Database and Released Database when a parent and/or child table is modified. For example, if the Released Database already contains task JGOAAAB with 5 subtasks, and the Working Database is changed to have only 3 subtasks, once the task is approved and transferred to the Released Database, the original task with 5 subtasks is deleted and then the new task is imported in with the 3 subtasks.

1.1.8 Approval/Release Status Changes and Effects

Table 1 summarizes the events that will cause approval/release status changes and their effects on the database for a Regular Configuration database.

Table 1. Approval/Release Changes and Effects – Regular Configuration

Old Record Status	New Record Status	Event Causing Status Change	Results to Database Caused by Status Change
Released (R)	Unapproved (U)	User saves data change(s)	<ul style="list-style-type: none"> ▪ Set Default LCA to “DATA FIX” or selected LCA ▪ User prompted for LCA ▪ Set ZAPPRVSTAT status to “U” ▪ ZCHGHIST record added
Released (R)	Unapproved (U)	Approval Application Change	<ul style="list-style-type: none"> ▪ Set Default LCA to “DATA FIX” or selected LCA ▪ ZAPPRVSTAT status set to “U” ▪ ZCHGHIST record added
Released (R)	Deleted (X)	Not Allowed	
Released (R)	Approved (A)	Not Allowed	
Approved (A)	Unapproved (U)	User saves data change(s)	<ul style="list-style-type: none"> ▪ Set LCA to selected LCA ▪ ZAPPRVSTAT status set to “U” ▪ ZCHGHIST record added
Approved (A)	Unapproved (U)	Approval Application Change	<ul style="list-style-type: none"> ▪ Set LCA to “DATA FIX” or selected LCA ▪ ZAPPRVSTAT status set to “U” ▪ ZCHGHIST record added
Approved (A)	Deleted (X)	Not Allowed	
Approved (A)	Released (R)	Release Data Fullfile Export Application	<ul style="list-style-type: none"> ▪ Data written to Release Data Fullfile Export ▪ ZAPPRVSTAT status set to “R” ▪ ZCHGHIST record added
Unapproved (U)	Approved (A)	Approval Application Change	<ul style="list-style-type: none"> ▪ Set Default LCA to “DATA FIX” or selected LCA ▪ ZAPPRVSTAT status set to “A” ▪ ZCHGHIST record added

Old Record Status	New Record Status	Event Causing Status Change	Results to Database Caused by Status Change
Unapproved (U)	Deleted (X)	User deletes data and chooses the save button	<ul style="list-style-type: none"> ▪ Following is only done if record exists in ZAPPRVSTAT ▪ Set Default LCA to selected LCA ▪ ZAPPRVSTAT status set to "D" ▪ ZCHGHIST record added
Unapproved (U)	Unapproved (U)	User saves data change(s) or Approval Application	<ul style="list-style-type: none"> ▪ Following is only done if record exists in ZAPPRVSTAT ▪ Set Default LCA to selected LCA ▪ ZCHGHIST record added
Unapproved (U)	Released (R)	Not Allowed	
Deleted (X)	Unapproved (U)	Not Allowed	
Deleted (X)	Approved (A)	Not Allowed	
Deleted (X)	Released (R)	Not Allowed	
Deleted (X)	Approved Delete (D)	User approves deleted data	<ul style="list-style-type: none"> ▪ Set Default LCA to selected LCA ▪ ZCHGHIST record added
Deleted (D)	Unapproved Delete (X)	User unapproves deleted data	<ul style="list-style-type: none"> ▪ Set Default LCA to selected LCA ▪ ZCHGHIST record added
Deleted (D)	Unapproved (U)	Not Allowed	
Deleted (D)	Approved (A)	Not Allowed	
Deleted (D)	Released (R)	Not Allowed	

Table 2 summarizes the events that will cause approval/release status changes and their effects on the database when a record has been marked for continuous control in Continuous Tracking database. Records are marked for continuous control when they have been in the Released Database and are changed. In addition, if the Insert Control is on, any inserted records are also marked for continuous control. Records that are not marked for continuous control are handled the same as Regular Control defined in Table 1.

Table 2. Approval/Release Changes and Effects – Continuous Tracking and Record Marked for Continuous Control

Old Record Status	New Record Status	Event Causing Status Change	Results to Database Caused by Status Change
Released (R)	Unapproved (U)	User saves data change(s)	<ul style="list-style-type: none"> ▪ Set Default LCA to “DATA FIX” or selected LCA ▪ User prompted for LCA ▪ Set ZAPPRVSTAT status to “U” ▪ ZCHGHIST record added
Released (R)	Unapproved (U)	Approval Application Change	<ul style="list-style-type: none"> ▪ Set Default LCA to “DATA FIX” or selected LCA ▪ User prompted for LCA ▪ ZAPPRVSTAT status set to “U” ▪ ZCHGHIST record added
Released (R)	Deleted (X)	Not Allowed	
Released (R)	Approved (A)	Not Allowed	
Approved (A)	Unapproved (U)	User saves data change(s)	<ul style="list-style-type: none"> ▪ Set Default LCA to “DATA FIX” or selected LCA ▪ User prompted for LCA ▪ ZAPPRVSTAT status set to “U” ▪ ZCHGHIST record added
Approved (A)	Unapproved (U)	Approval Application Change	<ul style="list-style-type: none"> ▪ Set Default LCA to “DATA FIX” or selected LCA ▪ User prompted for LCA ▪ ZAPPRVSTAT status set to “U” ▪ ZCHGHIST record added
Approved (A)	Deleted (X)	Not Allowed	
Approved (A)	Released (R)	Release Data Fullfile Export Application	<ul style="list-style-type: none"> ▪ Data written to Release Data Fullfile Export ▪ ZAPPRVSTAT status set to “R” ▪ ZCHGHIST record added

Old Record Status	New Record Status	Event Causing Status Change	Results to Database Caused by Status Change
Unapproved (U)	Approved (A)	Approval Application Change	<ul style="list-style-type: none"> ▪ Set Default LCA to "DATA FIX" or selected LCA ▪ User prompted for LCA ▪ ZAPPRVSTAT status set to "A" ▪ ZCHGHIST record added
Unapproved (U)	Deleted (X)	User deletes data and chooses the save button	<ul style="list-style-type: none"> ▪ Set Default LCA to "DATA FIX" or selected LCA ▪ User prompted for LCA ▪ ZAPPRVSTAT status set to "X" ▪ ZCHGHIST record added
Unapproved (U)	Unapproved (U)	User saves data change(s) or Approval Application Change - track all changes to the record	<ul style="list-style-type: none"> ▪ Set Default LCA to "DATA FIX" or selected LCA ▪ User prompted for LCA ▪ ZAPPRVSTAT status set to "U" ▪ ZCHGHIST record added
Unapproved (U)	Released (R)	Not Allowed	
Deleted (X)	Unapproved (U)	Not Allowed	
Deleted (X)	Approved (A)	Not Allowed	
Deleted (X)	Released (R)	Not Allowed	
Deleted (X)	Approved Delete (D)	User approves deleted data	<ul style="list-style-type: none"> ▪ Set Default LCA to selected LCA ▪ ZCHGHIST record added
Deleted (D)	Unapproved Delete (X)	User unapproves deleted data	<ul style="list-style-type: none"> ▪ Set Default LCA to selected LCA ▪ ZCHGHIST record added
Deleted (D)	Unapproved (U)	Not Allowed	
Deleted (D)	Approved (A)	Not Allowed	
Deleted (D)	Released (R)	Not Allowed	

1.2 EAGLE DATA CONFIGURATION MANAGEMENT SETUP

The following paragraphs describe the setup requirements for the EAGLE Data Configuration Management System. For detailed instructions on system setup, see paragraph 2.1.

1.2.1 General

The EAGLE Data Configuration Management System requires two instances of Oracle running. One is for the Working Database and one is for the Released Database. These databases must exist on the same server or on two servers that can be connected via an Oracle Database Link.

If the Released Database must exist on a database outside a firewall, and the Working Database is inside the firewall, it is recommended that a third instance of Oracle be included. Two instances of Oracle, representing the Working Database and the Released Database, should be setup inside the firewall. When data is migrated from the Working Database to the Released Database inside the firewall, the Released Database outside the firewall should be replaced with a fullfile from the Released Database on the inside of the firewall.

NOTE: Once it is determined that an End Item is ready for configuration control, the data should be fullfiled out of the Working Database and into the Released Database. As soon as the data is fullfiled into the Released Database, the ZENDITEM Table in the Working Database should be updated immediately to reflect that the item is under configuration control. All users should be logged off during the entire process. Refer to paragraphs 1.2.2 and 1.2.3 for details on settings for the Working and Released databases.

Once an End Item is under configuration control it is important that the triggers never be turned off or else configuration control will be jeopardized. In addition, configuration control cannot be turned on and off for an end item. Once configuration control has been turned off for an end item, the data in the Released Database is uncertain and it should be deleted out and reloaded from a fresh fullfile from the Working Database.

In summary, here are the main steps when setting up the Working and Released Databases:

1. Fullfile the data out of the Working Database and into the Released Database
2. Identify which tables are going to be under configuration control in the Working Database (Table ZCONTROL)
3. Turn Configuration Control on by setting the ZSYSTEM.DBTYPEZS to 'W' in the Working Database
4. Turn Configuration Control on by setting the ZSYSTEM.DBTYPEZS to 'R' in the Released Database
5. Turn Configuration Control on individual End Items by setting the ZENDITEM.CNFGCTRL to 1 in the Working Database
6. All data changes from this point on should be made to the Working Database Only

It is recommended that the Working Database and Released Database match exactly when the configuration management system is turned on for the end item so that the user is starting with a common “baseline”. However, if a user cannot put all the data in the Working Database into the Released Database (because it is not ready for customer review), then the user should delete the data that is not ready for release from the Released Database (would be step 1.5 in the list above) using the EAGLE application **before** they turn configuration control on for the end item.

1.2.2 Settings for the Working Database

The Working Database should have a 'W' in column DBTYPEZS of Table ZSYSTEM. Note that this value can only be set by the EAGLE or SU user. After an end item has been designated to be under configuration control and the data has been fullfiled out of the Working Database and fullfiled into the Released Database, the End Item Defaults should be updated to have the CNFGCTRL column of Table ZENDITEM set to 1, indicating the End Item is under configuration control.

A public database link must be established in the Working Database that points to the Released Database. This link can be setup using SQL PLUS logged on as EAGLE. The following statement is used to establish a public database link. It is very important that RELEASED be used as the name (see red). The 'XXXX' refers to the password for the EAGLE user and the 'YYYY' refers to the connect string which is the Net8 service name for the Released Database.

```
CREATE PUBLIC DATABASE LINK RELEASED.RSC.RAYTHEON.COM
CONNECT TO EAGLE
IDENTIFIED BY 'XXXX'
USING 'YYYY';
```

Tables that are under configuration control are identified in the ZCONTROL Table. Each end item can have different tables under configuration control and update access is limited to the EAGLE and SU user

In addition, at least one Logistic Change Authority Number should be established using the LCA Code Finder Function of the Data Config Management Discipline for each end item. 'DATA FIX' is used as the default entry for column LOGCHNGA in Table LCA. Only the EAGLE, SU, and Approval Administrator are allowed to make changes to this table.

1.2.3 Settings for the Released Database

The Released Database should have a 'R' in column DBTYPEZS of Table ZSYSTEM. Note that this value can only be set by the EAGLE or SU user.

The Released Database should not have a database link established and it should not have any entries in the ZCONTROL table. The ZENDITEM Table will need the end item to be added before the data can be fullfiled in from the Working Database. The Configuration Control Flag (ZENDITEM.CNFGCTRL) should be set to a 1 for under configuration control.

The Automatic Calculations should be turned off for the Released Database so that it reflects exactly what the Working Database reflects. This is done by setting column AUTCALZS to 0 in Table ZSYSTEM.

Data should **NEVER** be edited in the Released Database. All data updates are accomplished by migrating data from the Working Database. This is necessary to ensure database integrity between the Working and Released Databases.

1.3 IMPROVED USER COMMENT CAPABILITY

The user comment capability provided with the EAGLE Configuration Management System allows user comments to be tied to specific data records. Any data record can have multiple user comments and each user comment can have multiple responses. This improved comment capability is available in EAGLE version 5.0 regardless of whether the EAGLE Configuration Management System is utilized. The previous system for tracking comments in EAGLE remains and can be used to add comments linked to any EAGLE Discipline/Function.

SECTION 2



USING EAGLE DATA CONFIGURATION MANAGEMENT

SECTION 2 USING EAGLE DATA CONFIGURATION MANAGEMENT

2.0 INTRODUCTION

This section provides instructions for using the EAGLE Data Configuration Management System. Only the Database Administrator (EAGLE) or Superuser (SU), will have the capability to use all functionality described in this section. Users with EAGLE_APPROVAL_ROLE may perform all functions except releasing approved data to the released database. Users with the EAGLE_RELEASER_ROLE may perform all functions except approving/unapproving records. Refer to the *EAGLE Security Manual*, Section 1, Theory of Operation for more information on user roles in EAGLE. Refer to Section 1, Theory of Operation in this manual for a complete description of the EAGLE Data Configuration Management System and additional information on the capabilities of other user roles.

2.1 SYSTEM SETUP

The following paragraphs describe the procedures for setting up the EAGLE Data Configuration Management System. For additional information on setup requirements, see paragraph 1.2.

2.1.1 Table Configuration Control

The Database Administrator or Superuser can set which tables are under configuration control in the Working Database for a particular end item. To view which tables are currently under configuration control, or to set which tables are to be under configuration control, perform the following steps from the Navigator as shown in Figure 4.

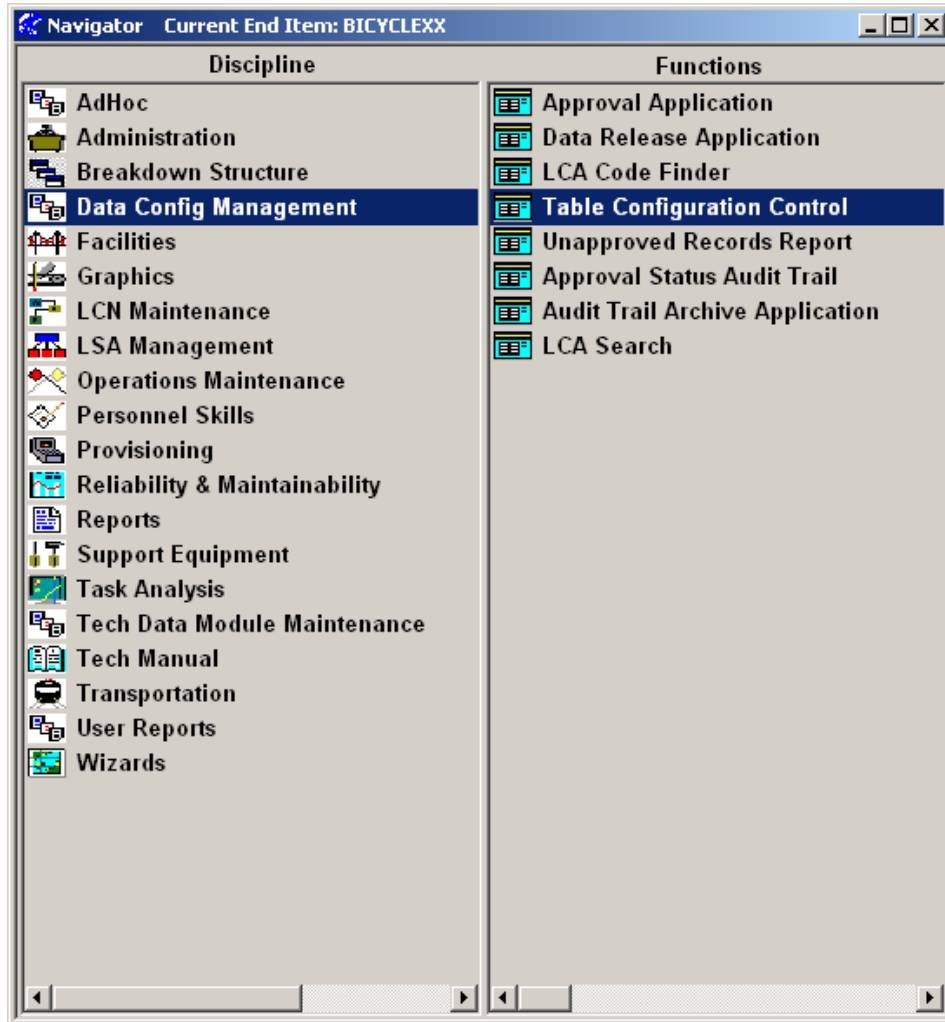


Figure 4. Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Table Configuration Control function by double clicking on it in the Navigator functions list or clicking on it and choosing the Execute button on the Main Toolbar. The Table Configuration Control Window (Figure 5) is displayed. Figure 5 is shown after the **Execute** button has been chosen and the '**LSAR Tables**' button has been selected

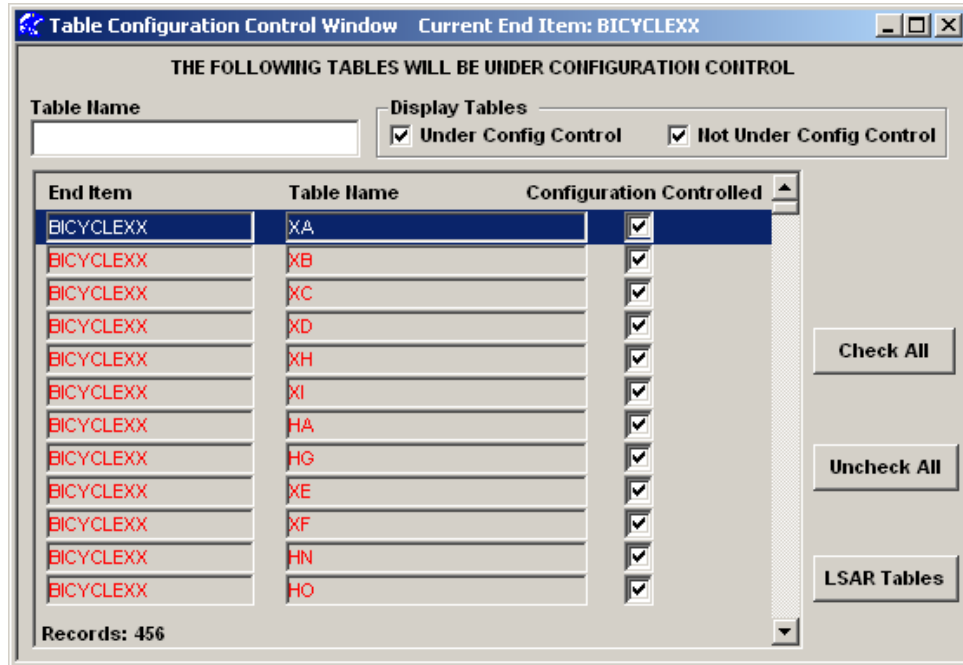


Figure 5. Table Configuration Control Window.

- Make sure the desired End Item is selected
- Check the **Display Tables** checkboxes as desired to display tables **Under Configuration Control**, **Not Under Configuration Control**, or both
- Enter search criteria to locate the table(s) to be displayed (HA, ZTMTASK, or ZIPB% etc.)
- Choose the **Execute** button on the Main Toolbar to display the tables that match the search criteria
- Set the **Configuration Controlled** checkbox as desired for each table.

Note: The **Check All**, **Uncheck All** and **LSAR Tables** buttons can be used to make general settings quickly.

- Choose the **Save** button on the Main Toolbar to save the changes to the configuration control settings

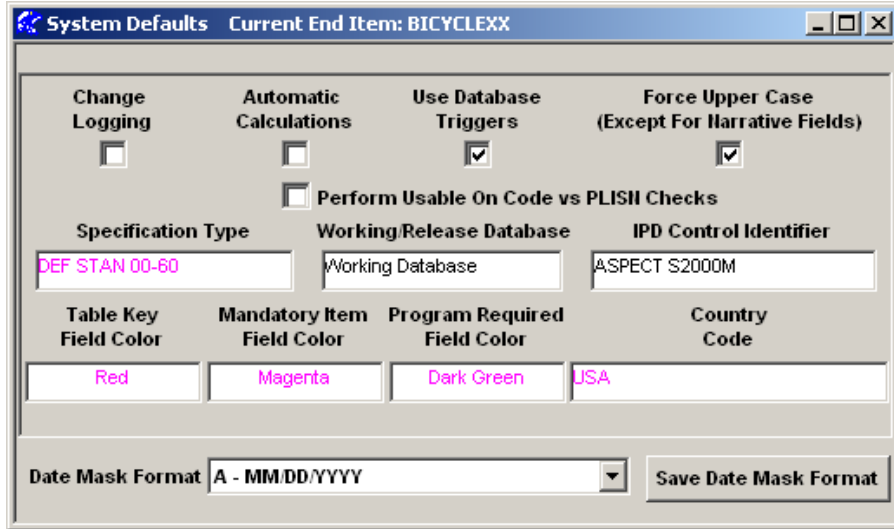


Figure 6. System Defaults Window.

2.1.2 Identifying the Working and Released Databases

The Database Administrator or Superuser can designate which databases are to be the Working and Released databases. To designate a database as a Working or Released database, perform the following steps from the Navigator.

- Access the Administration Discipline by clicking on it in the Navigator Disciplines list
- Open the System Defaults function by double clicking on it in the Navigator functions list. The System Defaults window (Figure 6) is displayed.
- From the **Working/Release Database** dropdown list box, select Working Database or Released Database as required
- Choose the **Save** button on the Main Toolbar to save the database type as Working or Released

2.1.3 Enabling Configuration Control for an End Item

The Database Administrator or Superuser can designate which end items are under configuration control in the Working Database. To designate which end items are to be under configuration control, perform the following steps from the Navigator.

- Access the Administration Discipline by clicking on it in the Navigator Disciplines list
- Make sure the desired End Item is selected
- Open the End Item Defaults function by double clicking on it in the Navigator functions list. The End Item Defaults window (Figure 7) is displayed.
- Use the **Configuration Control Setting** Drop Down to select the desired setting
- Choose the **Save** button on the Main Toolbar to save the changes to the End Item defaults

End Item	Use SGML Narrative Editor	Task Code Service Designator	Cube Unit of Measure	Configuration Control Setting
BICYCLEXX				Configuration Control

Def Stan 00-60 Issue Number	Data Module Spec Type	Publishing System	Pub Sys CSDB Project	Pub Sys IP Project	Data Module Issue	IPD Control ID Used
Issue 5		<input type="checkbox"/>				<input type="checkbox"/>

Records: 1

Figure 7. End Item Defaults Window.

2.2 LOGISTIC CHANGE AUTHORITY DATA

When released data is modified, users are required to enter a Logistic Change Authority (LCA) code authorizing changes to the approved and released data. The LCA may be an Engineering Change Proposal (ECP) number, Engineering Order (EO) number, Notice of Revision (NOR) number or other form of engineering documentation. For non-technical changes an LCA of "DATA FIX" can be used to authorize modifications. The following sub-paragraphs provide detailed instructions on adding, deleting, or changing LCA codes.

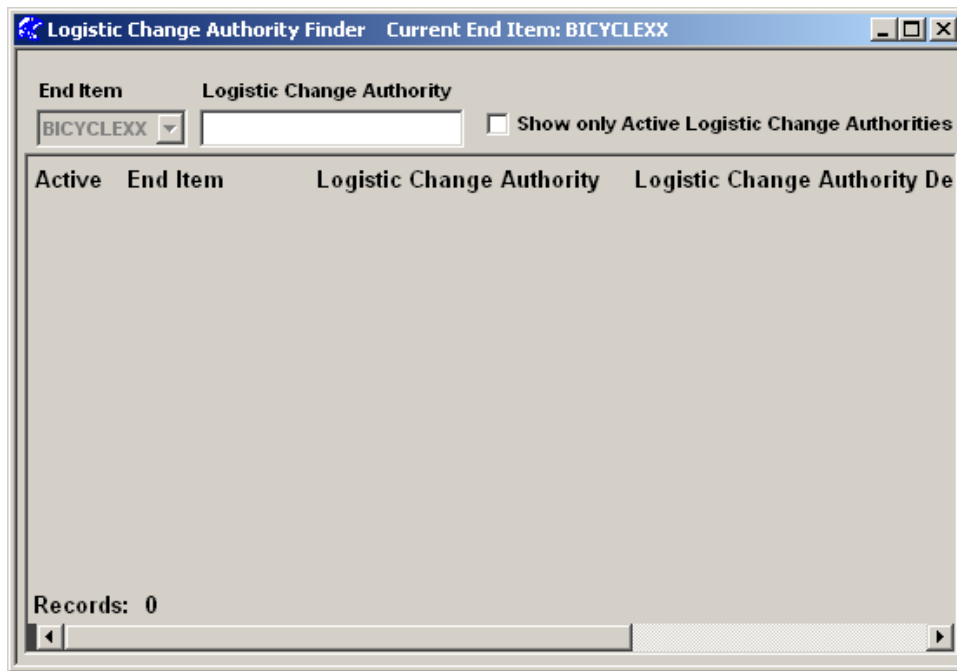


Figure 8. Logistic Change Authority Finder.

2.2.1 Using the LCA Finder

Any user may use the LCA Finder to view existing LCA Codes and their descriptions. To find existing LCA Codes, perform the following steps from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the LCA Code Finder by double clicking on it in the Navigator Functions list. The Logistic Change Authority Finder window (Figure 8) is displayed
- Make sure the appropriate End Item Acronym Code is selected. If necessary, select the appropriate End Item Acronym Code using the **End Item** button on the Main Toolbar.
- Enter search criteria to locate the desired LCA Code(s) if known

Note: The "Show only Active Logistic Change Authorities" checkbox may be used to eliminate inactive LCA Codes from the query results.

- Choose the **Execute** button on the Main Toolbar to return existing LCA Code records that match the search criteria. Figure 9 is displayed with 1 record returned with the Logistic Change Authority of 'DATA FIX'.

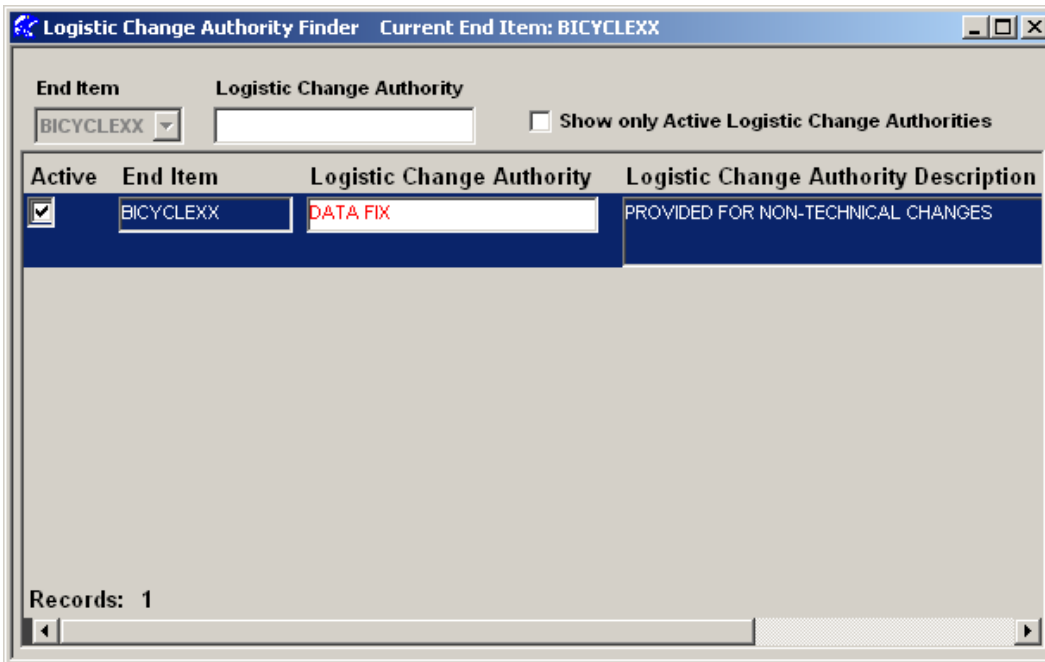


Figure 9. Logistic Change Authority Finder – Record Returned

2.2.2 Adding LCA Codes

To make new LCA codes available to users, the new codes must be added by the Database Administrator, Superuser, a user with EAGLE_APPROVAL_ROLE, or a user with EAGLE_RELEASE_ROLE. To add a new LCA Code, perform the following steps from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the LCA Code Finder by double clicking on it in the Navigator Functions list. The Logistic Change Authority Finder window (Figure 8) is displayed
- Make sure the appropriate End Item Acronym Code is selected. If necessary, select the appropriate End Item Acronym Code using the **End Item** button on the Main Toolbar.
- Choose the **Insert** button on the Main Toolbar. A blank row is inserted as shown in Figure 10. Figure 10 is shown after a record has been added (VECP-100)
- Choose the Active checkbox on the Logistic Change Authority Finder if this LCA Code is to be active (likely)
- Enter the new LCA code in the Logistic Change Authority box (up to 20 Characters, alphanumeric)
- Enter the LCA Description in the Logistic Change Authority Description box (optional entry, up to 255 characters)
- Choose the **Save** button on the Main Toolbar
- Add two more LCA Codes by performing the steps above. These LCA Codes will be used in the following paragraphs.

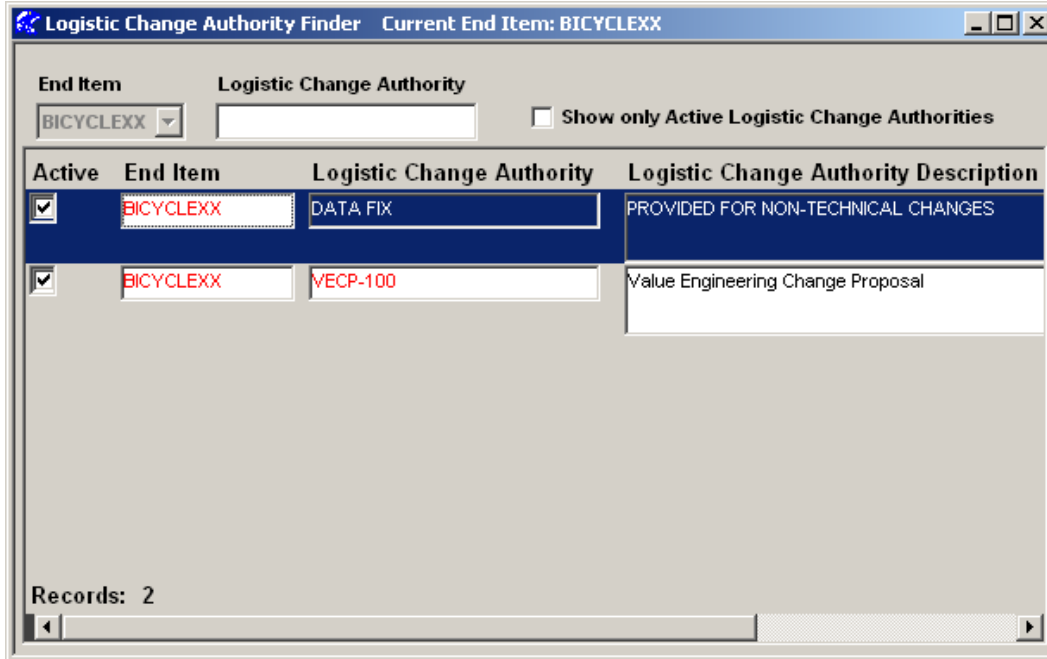


Figure 10. Logistic Change Authority Finder - Adding New Records.

2.2.3 Deleting LCA Codes

LCA codes may only be deleted by the Database Administrator, Superuser, a user with EAGLE_APPROVAL_ROLE, or a user with EAGLE_RELEASE_ROLE. To delete an LCA Code, perform the following steps from the Navigator shown in Figure 4.

Note: LCA Codes can be set to inactive to prevent further use. By setting LCA Codes to inactive rather than deleting them, the LCA Code remains available as legacy data. See paragraph 2.2.4 for instructions for setting LCA Codes to inactive.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the LCA Code Finder by double clicking on it in the Navigator Functions list. The Logistic Change Authority Finder window (Figure 8) is displayed
- Make sure the appropriate End Item Acronym Code is selected. If necessary, select the appropriate End Item Acronym Code using the **End Item** button on the Main Toolbar.
- Enter search criteria to locate the desired LCA Code(s)

Note: The "Show only Active Logistic Change Authorities" checkbox may be used to eliminate inactive LCA Codes from the query results.

- Choose the **Execute** button on the Main Toolbar to return existing LCA Code records that match the search criteria
- Select the LCA Code data record to be deleted
- Choose the **Delete** button on the Main Toolbar
- Choose the **Save** button on the Main Toolbar to delete the selected LCA Code data record

2.2.4 Changing LCA Code Data and Setting LCA Codes to Inactive

LCA Code information may be edited by the Database Administrator, Superuser, a user with EAGLE_APPROVAL_ROLE, or a user with EAGLE_RELEASES_ROLE. Among the most common changes that are likely to be made to LCA Code data records is to set the LCA Code to "inactive". To change LCA Code information, perform the following steps from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the LCA Code Finder by double clicking on it in the Navigator Functions list. The Logistic Change Authority Finder window (Figure 8) is displayed
- Enter search criteria to locate the desired LCA Code(s)

Note: The "Show only Active Logistic Change Authorities" checkbox may be used to eliminate inactive LCA Codes from the query results.

- Choose the **Execute** button on the Main Toolbar to return existing LCA Code records that match the search criteria
- To set LCA Codes to "inactive", uncheck the Active checkbox for the LCA Codes to be set to "inactive"
- To edit other fields, change the End Item, Logistic Change Authority, and/or Logistic Change Authority Description as desired
- Choose the **Save** button on the Main Toolbar

2.2.5 Assigning LCA Codes to Users

LCA Codes that are set to Active are automatically available to all users; however, there is an option to control which LCA Codes are available to users. ". To assign LCA Codes to a user, perform the following steps from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the LCA Code Finder by double clicking on it in the Navigator Functions list. The Logistic Change Authority Finder window (Figure 8) is displayed
- Choose the **Reports/Process>>LCA Users** menu item or the **LCA Users** button on the Application Toolbar. The Logistics Change Authority User Maintenance window (Figure 11) is displayed

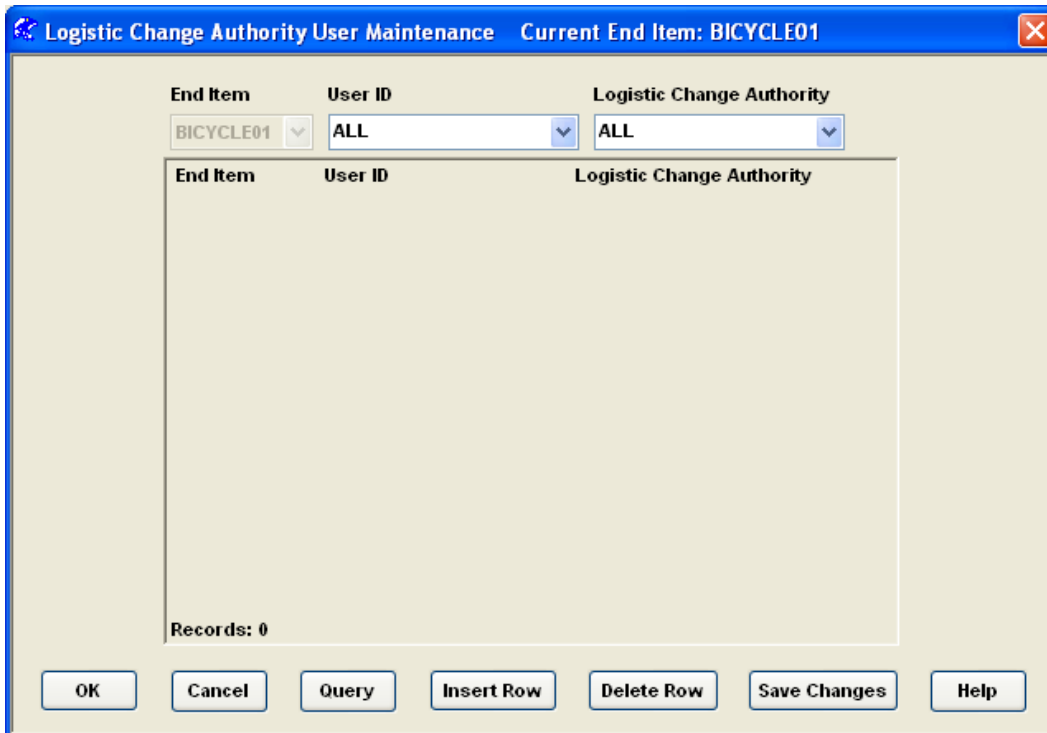


Figure 11. Logistic Change Authority User Maintenance Window

Note: Use the "User Id" and the "Logistic Change Authority" dropdown(s) to show only valid entries for those specific fields.

- Choose the **Insert Row** button. A blank row is inserted.
- Enter data as shown in Figure 12. Make sure the Underscore Id is entered in the **User Id** field.
- Choose the **Save Changes** button.

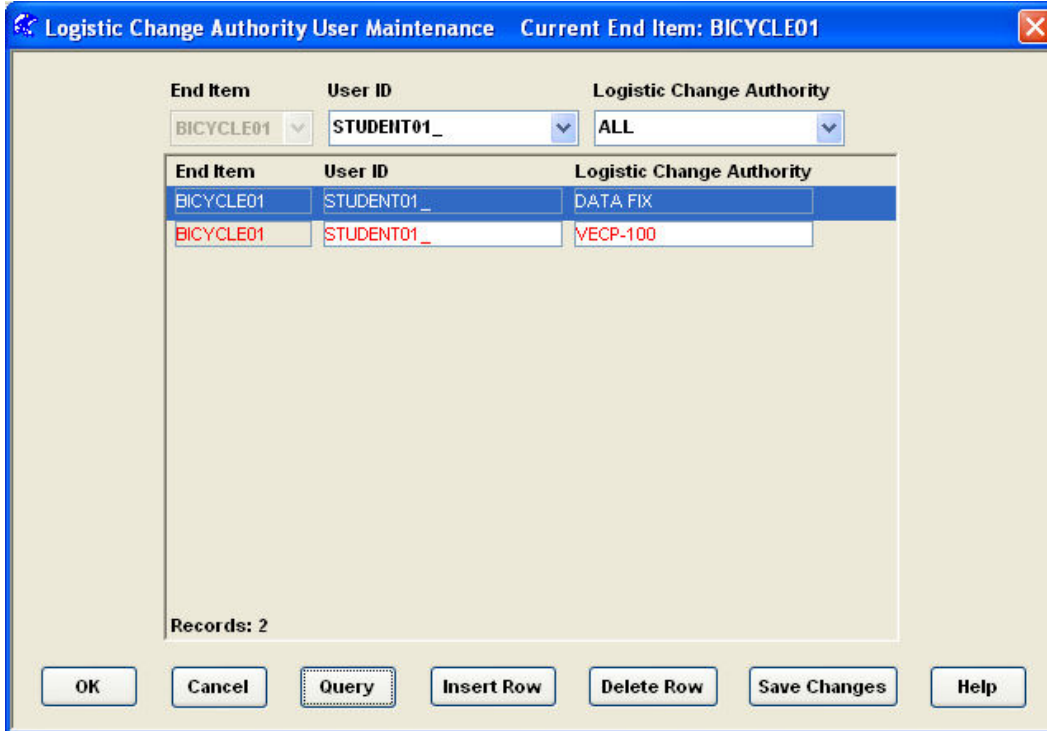




Figure 12. LCA User Maintenance Window-Insert Row

2.3 APPROVAL APPLICATION

The EAGLE Data Configuration Management Approval Application allows the Database Administrator, Superuser, or users with EAGLE_APPROVAL_ROLE to approve or unapprove data in the EAGLE Working Database. All users can utilize the Approval Application to view the approval status of any data records for which they have been granted privileges. Additionally, capability to enter comments and corresponding responses against any record is provided.

2.3.1 Viewing Approval Data

A drop down list box determines the starting point for viewing approval data (Figure 13). For example, if "Display Task Analysis Configuration Management Items" is selected, approval data will be displayed starting at Table CA. The  symbol to the left of any configuration item (Figure 15) expands that branch. This can also be accomplished by double clicking on the branch.

The  symbol to the left of any branch collapses the selected branch. This can also be accomplished by double clicking on the expanded branch.

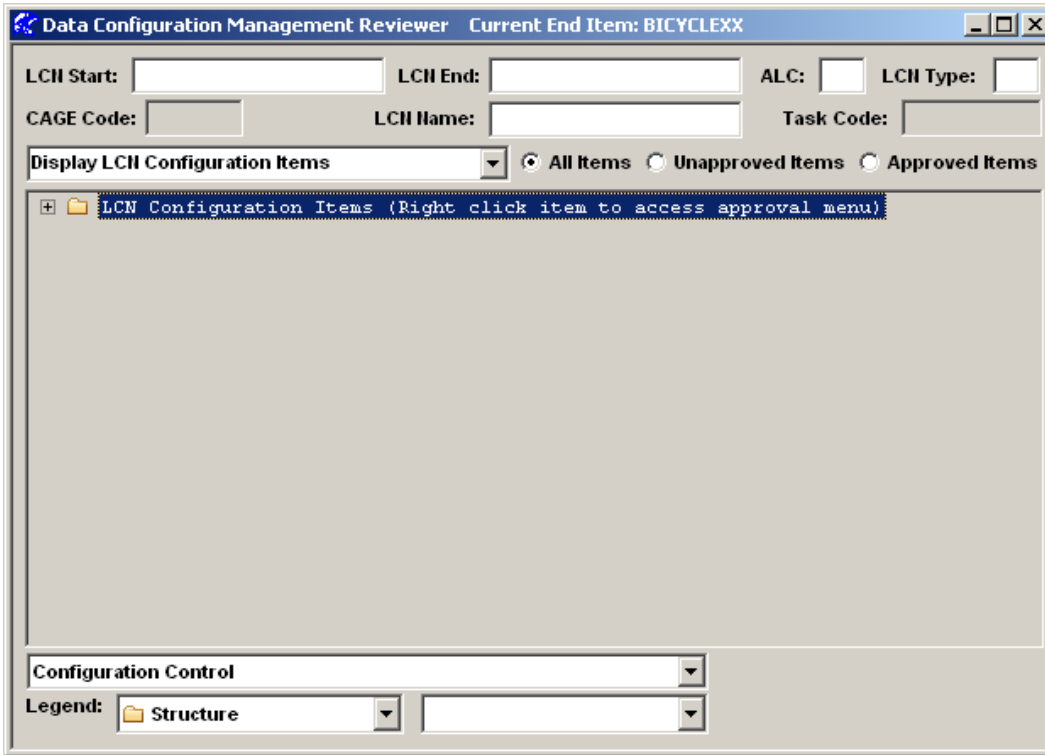


Figure 13. Data Configuration Management Reviewer.

To view approval data, perform the following steps from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Approval Application by double clicking on it in the Navigator Functions list. The Data Configuration Management Reviewer (Figure 13) is displayed

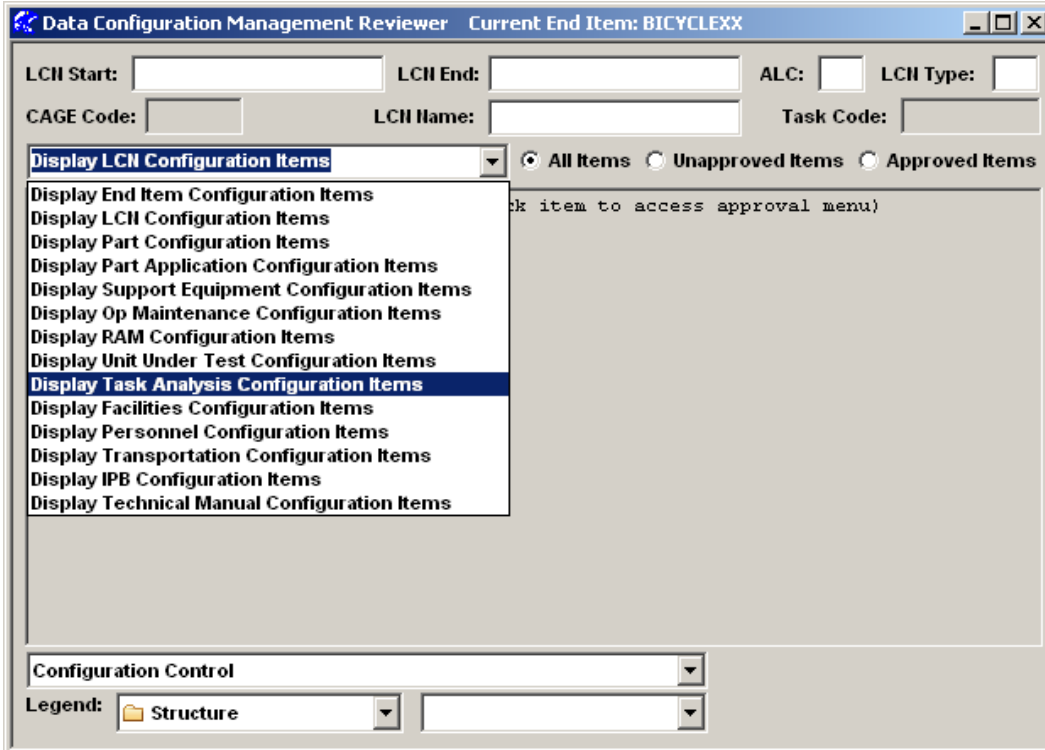


Figure 14. Display Selection in Data Configuration Management Reviewer

- Choose the items to be displayed from the drop down list box as shown in Figure 14. In this case, 'Display Task Analysis Configuration Items' is being chosen
- Enter search criteria to locate the desired Configuration Item record(s). The search criteria entered for this exercise is shown in Figure 15
- Choose the **Execute** button on the Main Toolbar to return Configuration Items that match the search criteria. Figure 15 is displayed. Figure 15 is shown after the expand icon has been selected

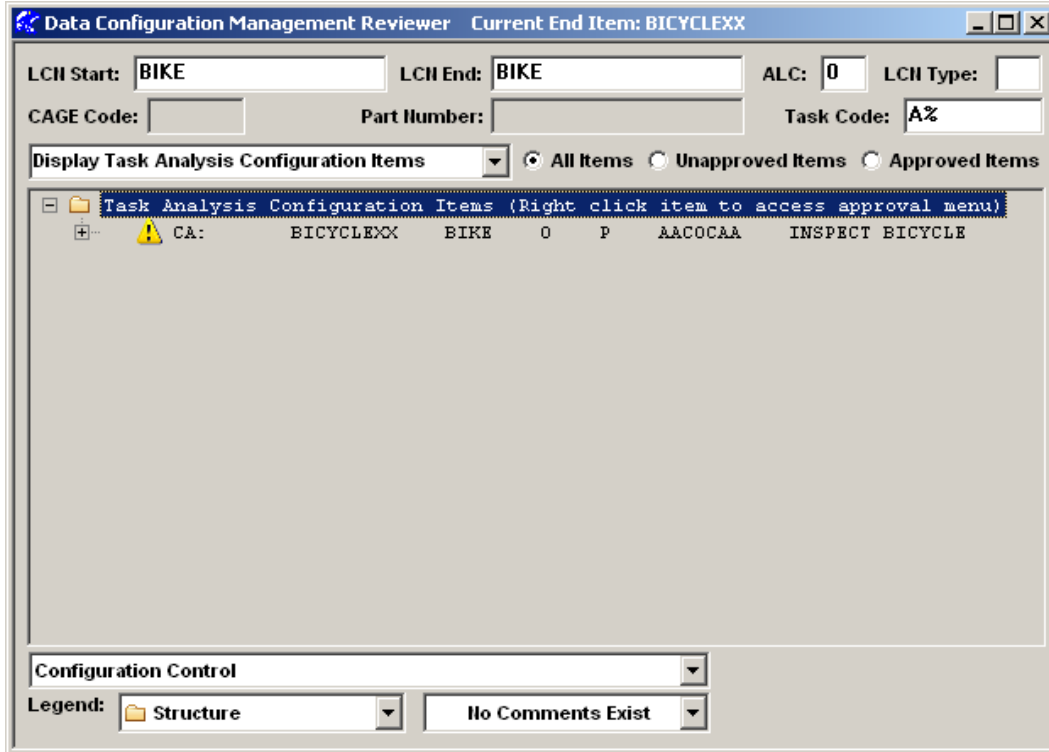


Figure 15. Data Configuration Management Reviewer-Search Results.

The approval and release status is displayed according to the legend at the bottom of the Data Configuration Management Viewer (Figure 15) buy utilizing the drop downs and as defined in Table 3.

Table 3. Data Configuration Management Reviewer Symbols.

SYMBOL	MEANING
	Released
	Unapproved
	Approved
	Not Configuration Controlled
	Deleted (Marked for Deletion from Released DB)
	Delete Approved (Approved for Deletion from Released DB)
(red tack)	Comment exists with no corresponding Response(s)
(green tack)	Comment and Response(s) exist, comment is closed
(yellow tack)	Comment and Response(s) exist, comment remains open

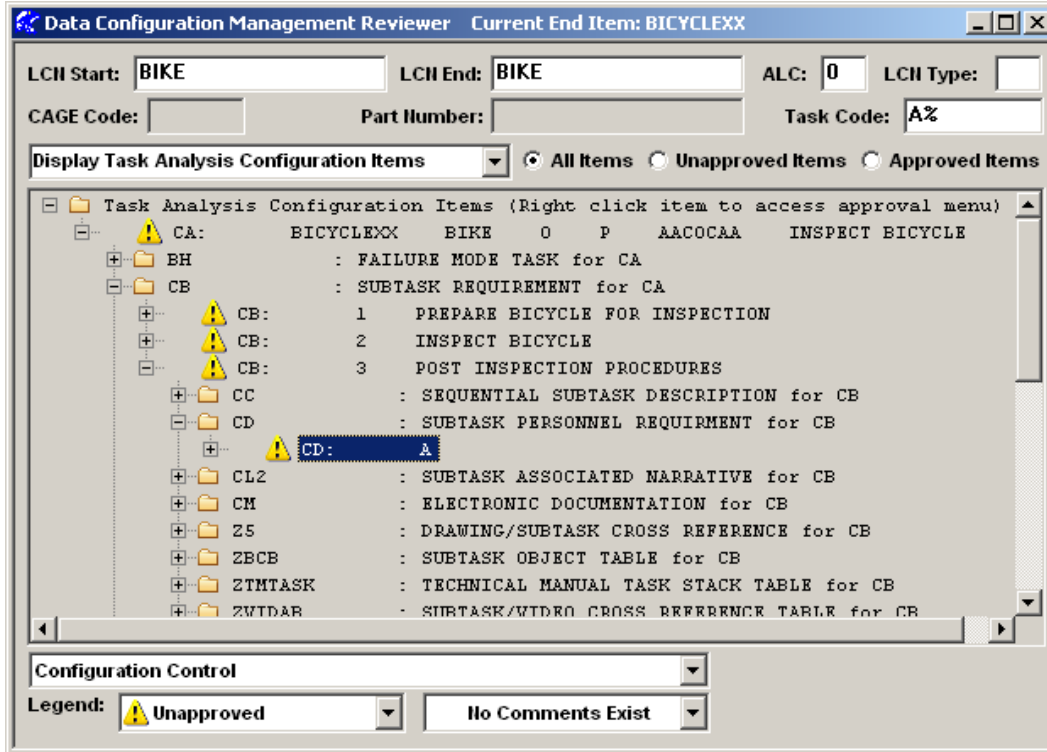


Figure 16. Viewing Data From the Data Configuration Management Reviewer.

2.3.1.1 Viewing a Data Record to be Approved

Users may view the actual data record from the Data Configuration Management Reviewer by performing the following.

- Select the data record to be viewed as shown in Figure 16. Identifying keys for each data record are displayed. For the example shown in Figure 16, the task code selected is 'AACOCOA' (from the selected CA record), the subtask selected is '3 POST INSPECTION PROCEDURES' (from the selected CB record), and the subtask person identifier is 'A' (from the selected CD record)

cd.eiacodxa	cd.lsaconxb	cd.altlcncb	cd.lcntypxb	cd.taskcdca	cd.subnumcb	cd.subpidcd	cd.skspcd
BICYCLEXX	BIKE	OP	AACOCOA		3A	14B	

Rows Returned:

Current Row:

Flow Key field changes down to child tables

FIELD COLORS

TABLE KEYS
MANDATORY ITEMS
PROGRAM REQUIRED

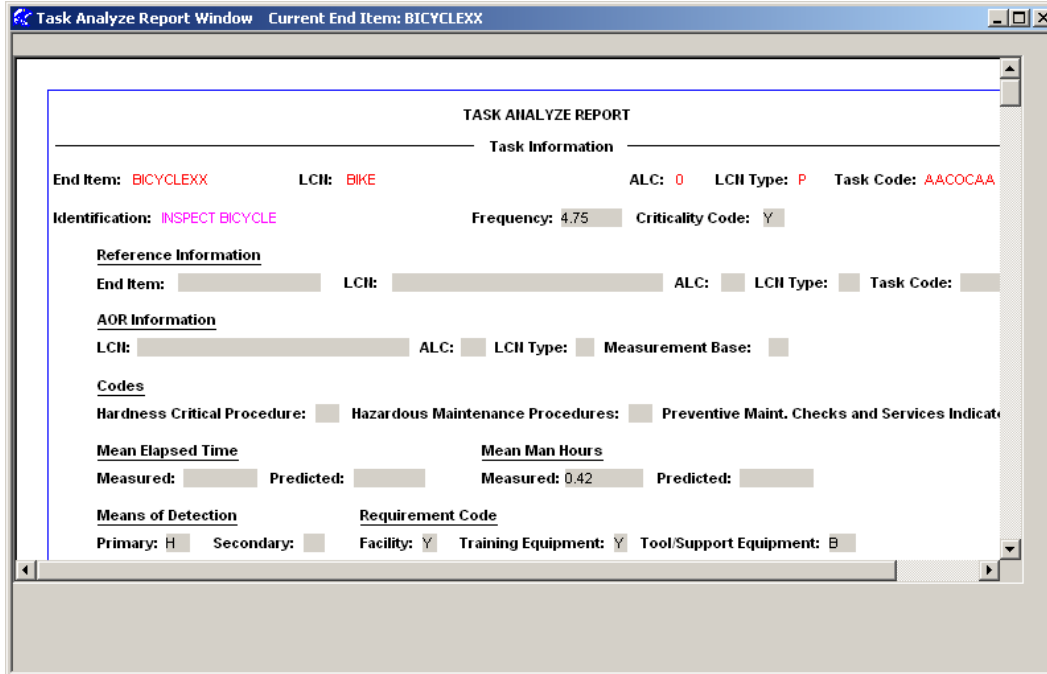
Figure 17. AdHoc Query Result Window.

- Choose the **Edit/View** button from the Function Specific Toolbar. The data is displayed using EAGLE's AdHoc Query Results Window as shown in Figure 17

2.3.1.2 Analyze Function

From the Approval Application, users can view a summary report against any top level configuration items. To perform the Analyze Function, perform the following steps from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Approval Application by double clicking on it in the Navigator Functions list. The Data Configuration Management Reviewer (Figure 13) is displayed



The screenshot shows a window titled "Task Analyze Report Window" with the subtitle "Current End Item: BICYCLEXX". The main content is a "TASK ANALYZE REPORT" form. The "Task Information" section includes: End Item: BICYCLEXX, LCI: BIKE, ALC: 0, LCI Type: P, Task Code: AACOCOA, Identification: INSPECT BICYCLE, Frequency: 4.75, and Criticality Code: Y. Below this are sections for Reference Information, AOR Information, Codes, Mean Elapsed Time, Mean Man Hours, Means of Detection, and Requirement Code, each with various input fields and checkboxes.

TASK ANALYZE REPORT						
Task Information						
End Item:	BICYCLEXX	LCI:	BIKE	ALC:	0	
		LCI Type:	P	Task Code:	AACOCOA	
Identification:	INSPECT BICYCLE		Frequency:	4.75	Criticality Code:	Y
Reference Information						
End Item:		LCI:		ALC:		
		LCI Type:		Task Code:		
AOR Information						
LCI:		ALC:		LCI Type:		
		Measurement Base:				
Codes						
Hardness Critical Procedure:		Hazardous Maintenance Procedures:		Preventive Maint. Checks and Services Indicate:		
Mean Elapsed Time						
Measured:		Predicted:		Mean Man Hours		
		Measured:	0.42	Predicted:		
Means of Detection			Requirement Code			
Primary:	H	Secondary:		Facility:	Y	
				Training Equipment:	Y	
				Tool/Support Equipment:	B	

Figure 18. Task Analyze Report Window.

- Choose the data to be analyzed from the drop down list box as shown in Figure 14
- Enter search criteria to locate the desired Configuration Item record(s) (Figure 15)
- Choose the **Execute** button on the Main Toolbar to return Configuration Items that match the search criteria (Figure 15)
- Select the record to be reviewed. In this example, Task Code 'AACOCOA' for LCN 'BIKE' ALC '0' was selected
- Choose the **Analyze** button on the Function Specific toolbar. The report is displayed as shown in Figure 18.

2.3.2 Approving Data

The Database Administrator, Superuser, or users with EAGLE_APPROVAL_ROLE can approve or unapprove data in the EAGLE Working Database. Individual records or entire branches (e.g. a CA record and all of its children in subordinate tables CB, CC, CD, CG, etc.) can be selected for approval/un-approval. Also, by selecting a folder containing multiple records all records in the folder can be approved/un-approved or all records in the folder and all of their child records can be approved/un-approved. Users should use caution when approving data in mass as, depending on database server configuration, this can exceed Oracle performance limitations.

Note: When approving/un-approving narrative data, changing the status of one line of narrative data changes the status of the entire narrative. Also, the user must refresh the viewer folder to see the updated icons for the entire narrative.

To approve/un-approve data, perform the following from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Approval Application by double clicking on it in the Navigator Functions list. The Data Configuration Management Reviewer (Figure 13) is displayed
- Choose the items to be displayed from the drop down list box as shown in Figure 14. For this example 'Display LCN Configurations' will be chosen (Figure 19)
- Enter search criteria to locate the desired Configuration Item record(s)
- Choose the **Execute** button on the Main Toolbar to return Configuration Items that match the search criteria. Choose the open icon next to the top folder to display data record(s) (Figure 19)

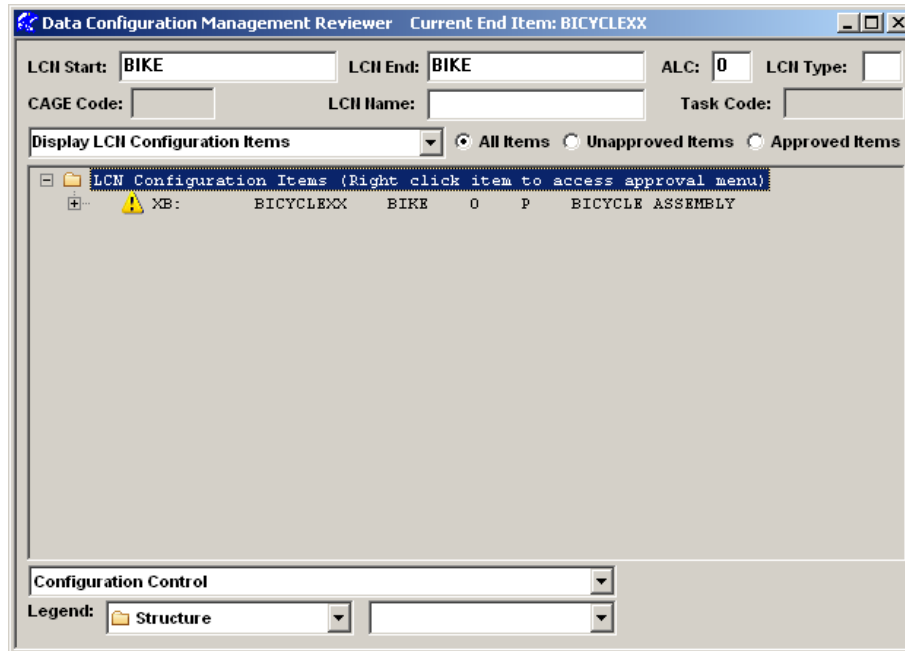


Figure 19. DCM Reviewer – LCN Configuration Items

- Right click the data record (or record folder) to be approved/un-approved. The Approval Menu is displayed as shown in Figure 20

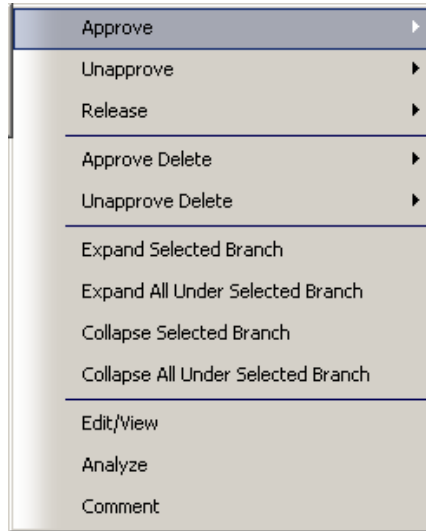


Figure 20. Approval Menu.

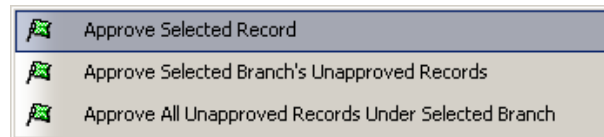


Figure 21. Approve Selected Record

- Hover the mouse over the desired approve action. The additional approval menu is displayed (Figure 21). Choose the 'Approve Selected Record' action by left clicking on it. The approval status is updated as selected. If a branch was selected the window will drill down through the branch and perform the approval/un-approval action selected.

2.3.4 Comment Function

The user comment capability provided with the EAGLE Configuration Management System allows user comments to be tied to specific data records. Any data record can have multiple user comments and each user comment can have multiple responses.

2.3.4.1 Viewing Existing Comments and Responses

To view existing comments and responses, perform the following steps from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Approval Application by double clicking on it in the Navigator Functions list. The Data Configuration Management Reviewer (Figure 13) is displayed
- Choose the items to be displayed from the drop down list box as shown in Figure 14
- Enter search criteria to locate the desired Configuration Item record(s) (Figure 15)
- Choose the **Execute** button on the Main Toolbar to return Configuration Items that match the search criteria
- Expand the displayed item to display the record against which the comment/response to be viewed exists. Comments exist against records marked as indicated in Table 3.
- Select the record for which comments/responses are to be viewed

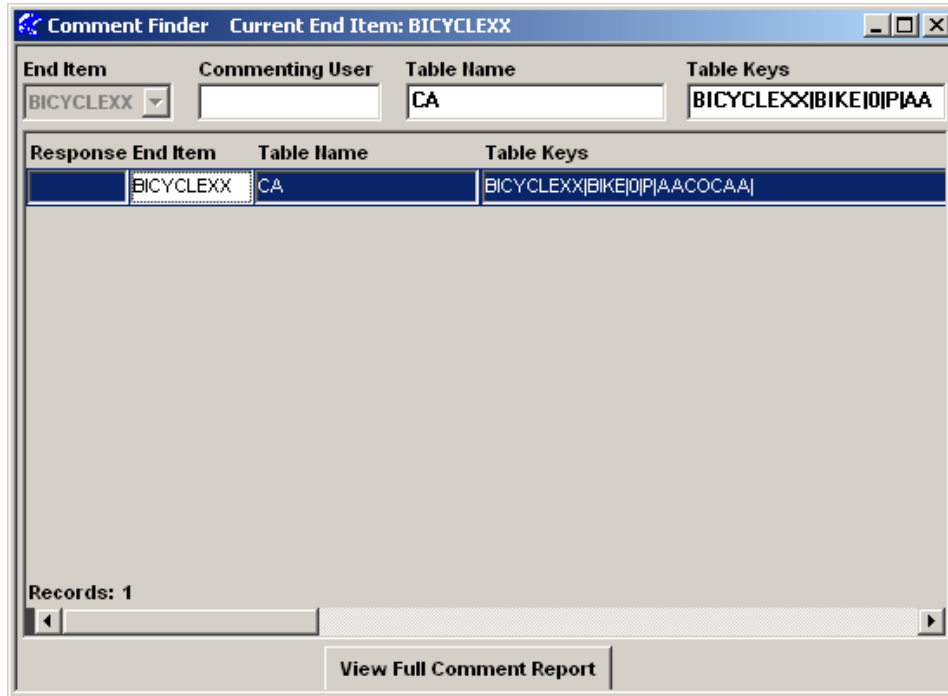


Figure 23. Comment Finder.

- Choose the **Comment** button on the Application Specific toolbar. The Comment Finder is displayed (Figure 23) with the record selected in the previous step displayed

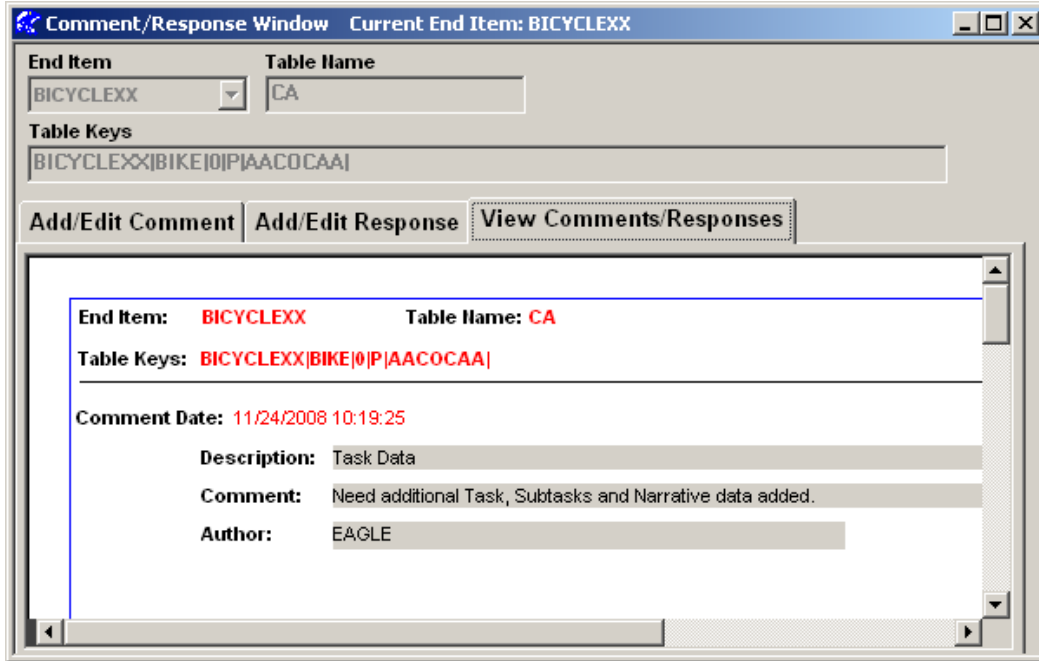


Figure 24. Comment/Response Window - View.

- Choose the **Edit/View** button on the Application Specific Toolbar. The Comment/Response Window is displayed (Figure 24). Figure 24 depicts the Comment/Response Window after the following has been performed
- Choose the **View Comments/Responses** tab on the Comment/Response Window to display the comment and all existing responses

Note: All comments and responses for a given record can be viewed from the Comment Finder by selecting the View Full Comment Report button.

2.3.4.2 Adding Comments

To add a new comment, perform the following from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Approval Application by double clicking on it in the Navigator Functions list. The Data Configuration Management Reviewer (Figure 13) is displayed
- Choose the items to be displayed from the drop down list box as shown in Figure 14
- Enter search criteria to locate the desired Configuration Item record(s)
- Choose the **Execute** button on the Main Toolbar to return Configuration Items that match the search criteria
- Expand the displayed item to display the record against which comments are to be added
- Select the record for which comments are to be added
- Choose the **Comment** button from the Application Specific Toolbar. If necessary Choose **OK** in response to the 'No Records Found' message. The Comment Finder is displayed (Figure 23) with the record selected in the previous step displayed.

The screenshot shows a software window titled "Comment/Response Window" with a subtitle "Current End Item: BICYCLEXX". The window has a tabbed interface with three tabs: "Add/Edit Comment", "Add/Edit Response", and "View Comments/Responses". The "Add/Edit Comment" tab is active. At the top, there are two input fields: "End Item" containing "BICYCLEXX" and "Table Name" containing "XB". Below these is a "Table Keys" field containing "BICYCLEXX|BIKE|O|P". The main area contains a "Date" field with the value "11/24/2008 12:56:32" and a "Closed" checkbox. The "Description" field contains the text "Reliability". The "Comment" field contains the text "Reliability data is required for this LCN.". At the bottom, there is a "User Name" field.

Figure 25. Comment/Response Window – Add/Edit Comment.

- Choose the **New Cmmt** button. The Comment/Response Window is displayed (Figure 25). Figure 25 depicts the Comment/Response Window after the comments have been added.
- Make sure the **Add/Edit Comment** tab is selected
- Enter comments as required
- Choose the **Save** button on the Main Toolbar to save the new comments

2.3.4.3 Responding to Comments

To respond to a comment, perform the following from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Approval Application by double clicking on it in the Navigator Functions list. The Data Configuration Management Reviewer (Figure 13) is displayed
- Choose the items to be displayed from the drop down list box as shown in Figure 14
- Enter search criteria to locate the desired Configuration Item record(s)

Comment/Response Window Current End Item: BICYCLEXX

End Item: BICYCLEXX Table Name: XB

Table Keys: BICYCLEXX|BIKE|O|PI

Add/Edit Comment | **Add/Edit Response** | View Comments/Responses

Date: 11/24/2008 13:23:18

Description: Response to Reliability Comment.

Response: Reliability data is required and will be added per contract.

User Name: EAGLE

Records: 1 of 1

Figure 26. Comment/Response Window – Add/Edit Response

- Choose the **Execute** button on the Main Toolbar to return Configuration Items that match the search criteria
- Expand the displayed item to display the record against which response to comments are to be entered
- Select the record for which response to comments are to be added
- Choose the **Comment** button from the Application Specific Toolbar. The Comment Finder is displayed (see Figure 23) with the record selected in the previous step displayed.
- Choose the **Edit/View** button on the Application Specific Toolbar. The Comment/Response Window is displayed (Figure 26). Figure 26 shown after the following
- Choose the **Add/Edit Response** tab
- Enter the response as required
- Choose the **Save** button on the Main Toolbar to save the comment response

2.3.4.4 Editing Existing Comments

To edit existing comments, perform the following steps from the Navigator shown in Figure 4:

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Approval Application by double clicking on it in the Navigator Functions list. The Data Configuration Management Reviewer (Figure 13) is displayed
- Choose the items to be displayed from the drop down list box as shown in Figure 14
- Enter search criteria to locate the desired Configuration Item record(s)
- Choose the **Execute** button on the Main Toolbar to return Configuration Items that match the search criteria
- Expand the displayed item to display the record against which comments are to be edited
- Select the record for which comments are to be edited
- Choose the **Comment** button from the Application Specific Toolbar. The Comment Finder is displayed (Figure 23) with the record selected in the previous step displayed.
- Choose the **Edit/View** button on the Application Specific Toolbar. The Comment/Response Window is displayed (Figure 25)
- Make sure the **Add/Edit Comment** tab is selected
- Edit comments as required
- If the comment is to be closed, click the **Closed** checkbox
- Choose the **Save** button on the Main Toolbar to save the edited comments

2.3.4.5 Editing Existing Responses

To edit existing responses, perform the following steps from the Navigator shown in Figure 4:

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Approval Application by double clicking on it in the Navigator Functions list. The Data Configuration Management Reviewer (Figure 13) is displayed
- Choose the items to be displayed from the drop down list box as shown in Figure 14
- Enter search criteria to locate the desired Configuration Item record(s)
- Choose the **Execute** button on the Main Toolbar to return Configuration Items that match the search criteria
- Expand the displayed item to display the record against which comment responses are to be edited
- Select the record for which comment responses are to be edited
- Choose the **Comment** button from the Application Specific Toolbar. The Comment Finder is displayed (Figure 23) with the record selected in the previous step displayed.
- Choose the **Edit/View** button on the Application Specific Toolbar. The Comment/Response Window is displayed (Figure 26)
- Make sure the **Add/Edit Response** tab is selected
- Edit comment responses as required
- Choose the **Save** button on the Main Toolbar to save the edited comment responses

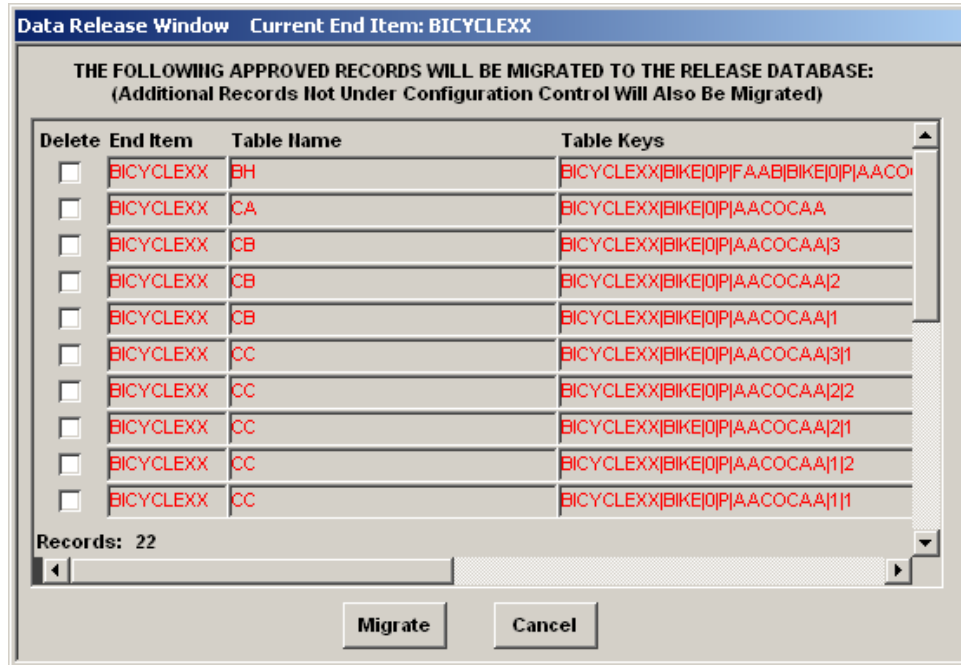


Figure 27. Data Release Window.

2.4 RELEASING DATA

The Database Administrator, Superuser, or users with EAGLE_RELEASER_ROLE can release data using the EAGLE Data Configuration Management System. Approved records and additional records not under configuration control are migrated from the working database to the released database. If parent data does not exist in the released database and is not marked as approved in the working database, or if cross edit violations or data element definition conflicts exist in the data to be released, the migration of the discrepant data will not occur.

To release data from the working database to the released database, perform the following steps from the Navigator shown in Figure 4:

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Data Release Application by double clicking on it in the Navigator functions list. The Data Release Window (Figure 27) is displayed

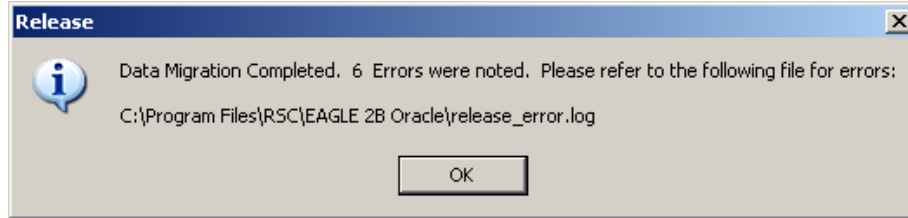


Figure 28. Release Errors Noted Message.

- Choose the **Migrate** button on the Data Release Window to migrate data to the released database. If errors occur, a message is displayed as shown in Figure 28 indicating the path and file name of an error file
- If errors occurred during the previous step, choose the **OK** button on the message box to acknowledge the error message. A sample error log, displayed using the Notepad text editor, is shown in Figure 29

```

*****
      Database error recorded 11/24/2008 at 14:03:23
ORA-00942: table or view does not existORA-02063: preceding line from RELEASEDD
DELETE MRS_AUDIT@RELEASED
*****
      Database error recorded 11/24/2008 at 14:03:23
ORA-00942: table or view does not existORA-02063: preceding line from RELEASEDD
DELETE MRO_AUDIT@RELEASED
*****
      Database error recorded 11/24/2008 at 14:03:24
ORA-00942: table or view does not existORA-02063: preceding line from RELEASEDD
DELETE ZTA_DM@RELEASED WHERE EIACODXA = 'BICYCLEXX'
*****
      Database error recorded 11/24/2008 at 14:03:24
ORA-00942: table or view does not existORA-02063: preceding line from RELEASEDD
DELETE ZTA_EO@RELEASED WHERE EIACODXA = 'BICYCLEXX'
*****
      Database error recorded 11/24/2008 at 14:03:24
ORA-00942: table or view does not existORA-02063: preceding line from RELEASEDD
DELETE ZTA_TASK@RELEASED WHERE EIACODXA = 'BICYCLEXX'
*****
      Database error recorded 11/24/2008 at 14:03:24
ORA-00942: table or view does not existORA-02063: preceding line from RELEASEDD
DELETE ZTA@RELEASED WHERE EIACODXA = 'BICYCLEXX'

```

Figure 29. Sample Error Log.

2.5 EDITING APPROVED DATA IN THE WORKING DATABASE

When approved data is edited and saved or deleted and saved in the working database, a Data Configuration Control Warning message is displayed as shown in Figure 30. If the **Yes** button is selected, the approval status of the record will be changed to Unapproved and the data edit/deletion will occur (provided cross edits, rules and referential integrity are not violated). If the **No** button is selected, the data edit or deletion is aborted. Upon closing the window in which the edit(s)/deletion(s) were made, the user will be prompted to save changes. To avoid changing the approval status (and making the data changes), the user must respond **No** to saving changes.

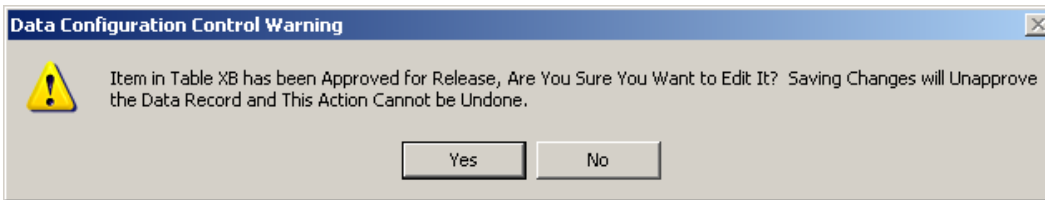


Figure 30. Data Configuration Control Warning.

2.6 EDITING RELEASED DATA IN THE WORKING DATABASE

When released data is edited and saved or deleted and saved in the working database, users are prompted to select an LCA Code as shown in Figure 31. An optional Reason for Change may also be entered. Choosing the **Cancel** button will cancel the save and return the EAGLE editing window without updating the approval status of the data. Choosing the **Save** button will change the approval status of the data to unapproved, write the change data to the history table, and attempt to save the data to the database.

The potential of another trigger error (flagging data that is in violation of the standard) being raised after the approval status has been updated exists. PowerBuilder code tracks the change information entered by the user so that when the user finally corrects all errors, the user is not prompted again to enter an LCA Code. If the user decides not to correct the errors, the data in the working and released databases will remain the same, however the approval status will be unapproved.

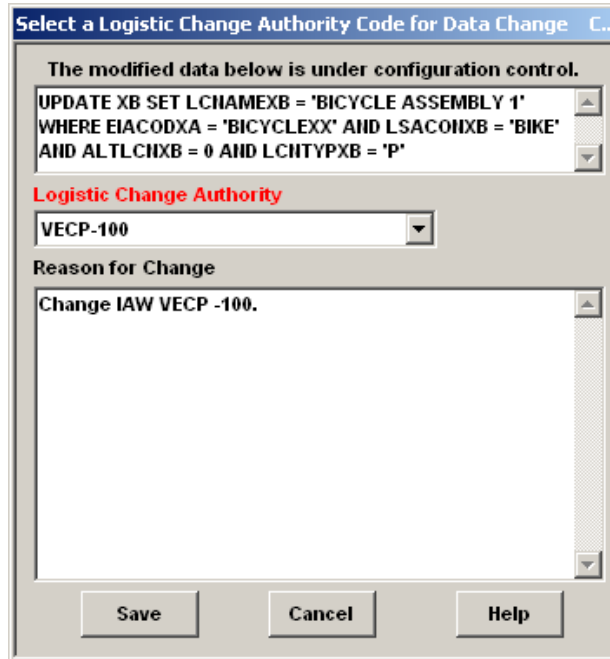


Figure 31. Select a Logistic Change Authority Code for Data Change Window.

2.7 VIEWING THE APPROVAL STATUS AUDIT TRAIL

Whenever data is added, changed, or deleted, or whenever the approval status is changed, a history record is written to table ZCHGHIST. The Approval Status Audit Trail function available in the Data Config Management discipline allows users to review this change history. To view the Approval Status Audit Trail, perform the following from the Navigator.

- Access the Data Config Management Discipline by clicking on it in the Navigator Disciplines list
- Open the Approval Status Audit Trail by double clicking on it in the Navigator Functions list. The Approval Status Audit Trail window (Figure 32) is displayed. Figure 32 is shown after the search criteria has been entered and the **Execute** button has been chosen

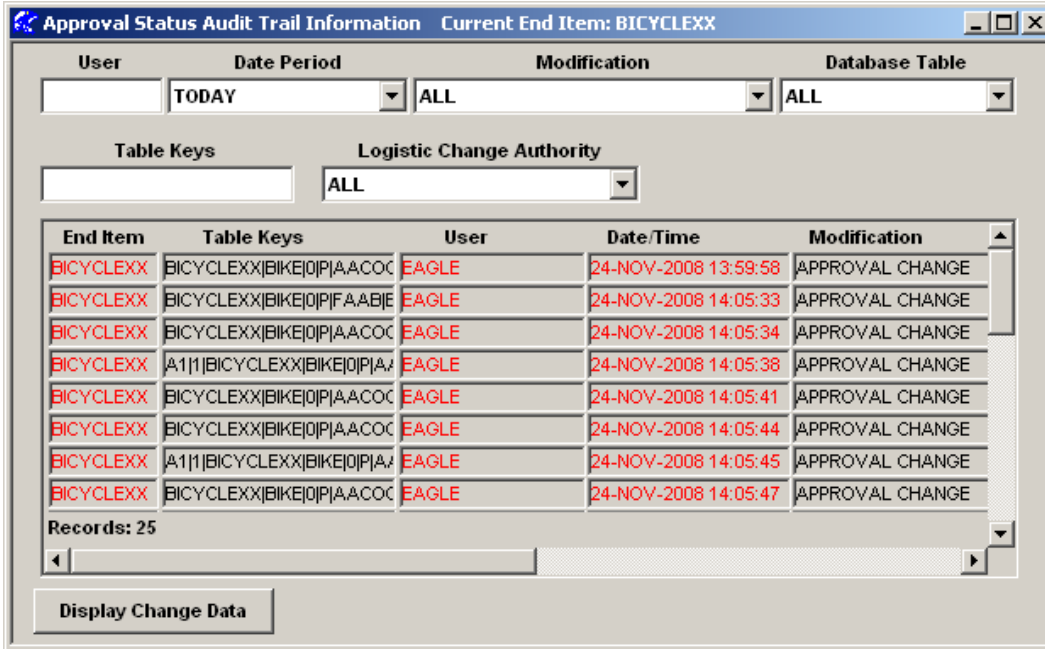


Figure 32. Approval Status Audit Trail Window.

- Enter search criteria to locate Approval Status Audit Trail records to be retrieved
- Choose the **Execute** button on the Main Toolbar to return Approval Status Audit Trail records that match the search criteria
- To view the data record changed, choose the **Display Change Data** button. The Approval Status Audit Trail Change Information window (Figure 33) is displayed.

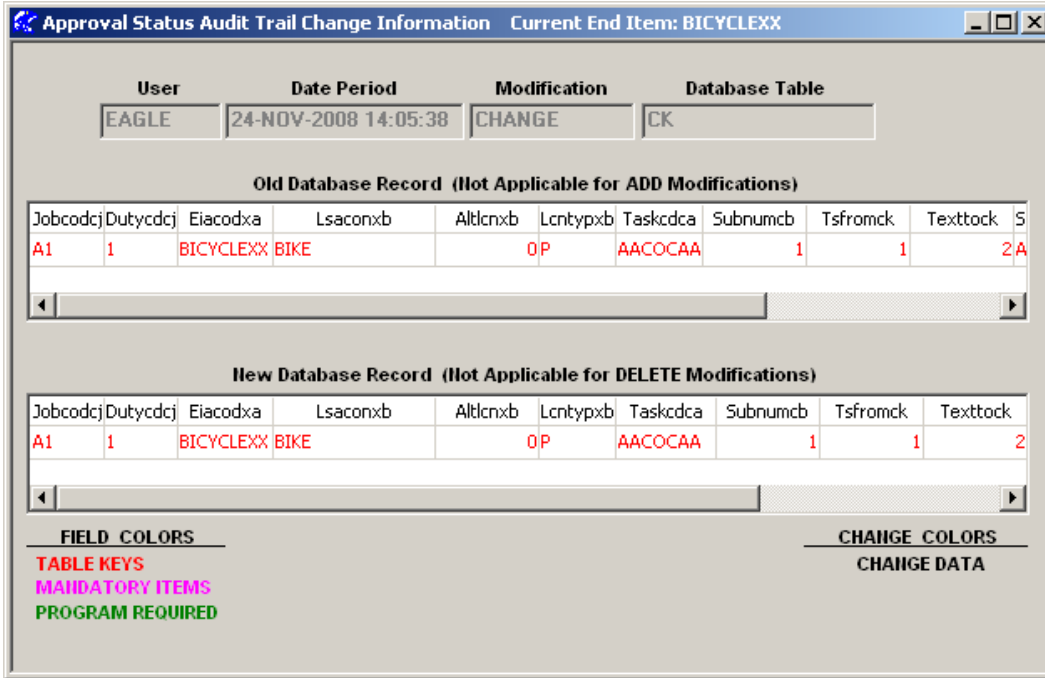


Figure 33. Approval Status Audit Trail Change Information Window.



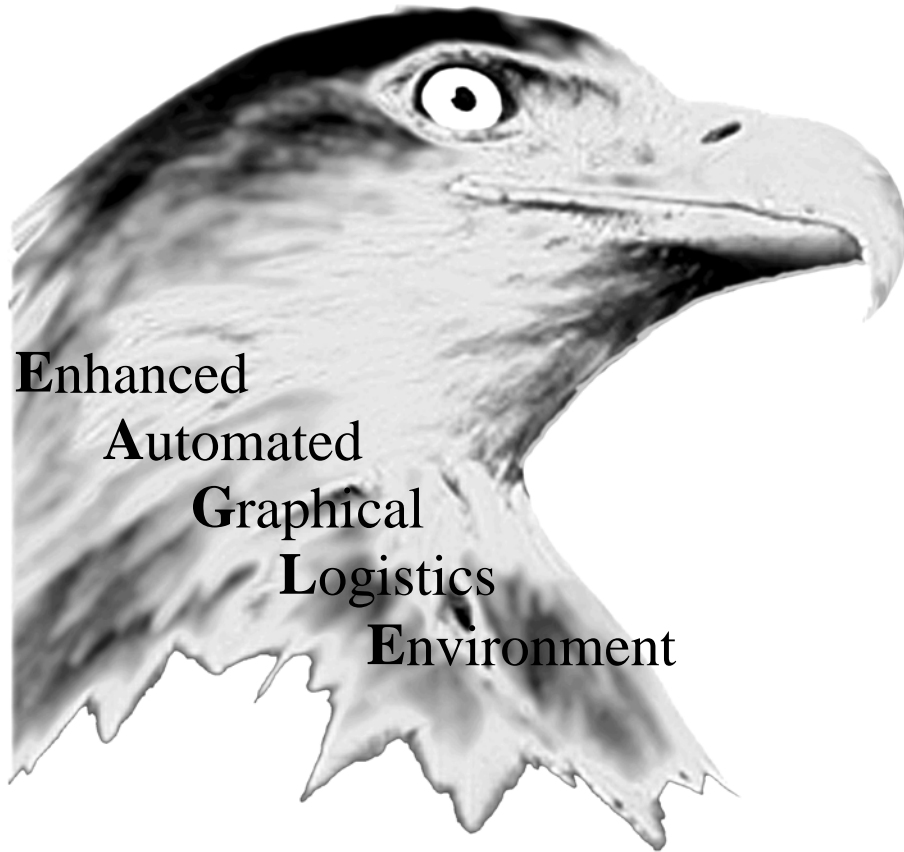
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Logistics
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Technical support is provided by the EAGLE Team of Raytheon Company. Phone support is available Monday through Friday from 8:00 a.m. to 4:30 p.m. Mountain Standard Time. EAGLE technical support personnel can be reached at (520) 663-6673. Training on the EAGLE product is available.

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