



**Enhanced  
Automated  
Graphical  
Logistics  
Environment**

**EAGLE Illustrated Parts Data for S1000D  
VERSION 8**

**29 September 2009**

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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***



# ***ILLUSTRATED PARTS DATA MODULES***

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## SECTION 1 ILLUSTRATED PARTS DATA MODULES

### 1.0 INTRODUCTION

This section provides a brief overview of the Enhanced Automated Graphical Logistics Environment (EAGLE) illustrated parts data module capabilities.

The system can generate Illustrated Parts Breakdown (IPB) Data Modules (DMs) using existing data in EAGLE Logistics Support Analysis Record (LSAR) table HK, or by auto-generating HK records, provided that provisioning data exists in tables HA, HG, and HO. In addition to the key fields for these tables, at a minimum, non-key elements of Item Name (from HA), Quantity per Assembly (from HG), and Item Category Code (from HG) should be populated.

IPB DMs are created in EAGLE using a four step process:

1. An IPB figure is established and designed in EAGLE table ZIPBINPUT using the Tech Manual Discipline IPB RPSTL Finder.
2. The IPB figure is built in table ZIPBMAIN from existing HK data or by building the IPB in HK and ZIPBMAIN from LSAR provisioning data as previously described. This is also accomplished from the Tech Manual Discipline IPB RPSTL Finder.
3. An IPB DM is created in the Arbortext CSDB for S1000D and linked to the EAGLE IPB figure created in steps 1 and 2. This is Tech Data Module Maintenance Discipline using the Data Module Maintenance Function.
4. Finally, the IPB DM is released to the common source database (CSDB). This is also accomplished from the Tech Data Module Maintenance Discipline using the Data Module Maintenance Function.

Changes to the provisioning data used in the IPB DM would require steps 2 and 4 to be repeated in order to reflect the changes in the IPB DM.

### 1.1 ILLUSTRATED PARTS BREAKDOWN FIGURE DESIGN

Access the Tech Manual Discipline from the Navigator and launch the IPB/RPSTL Finder Function as illustrated in Figure 1.

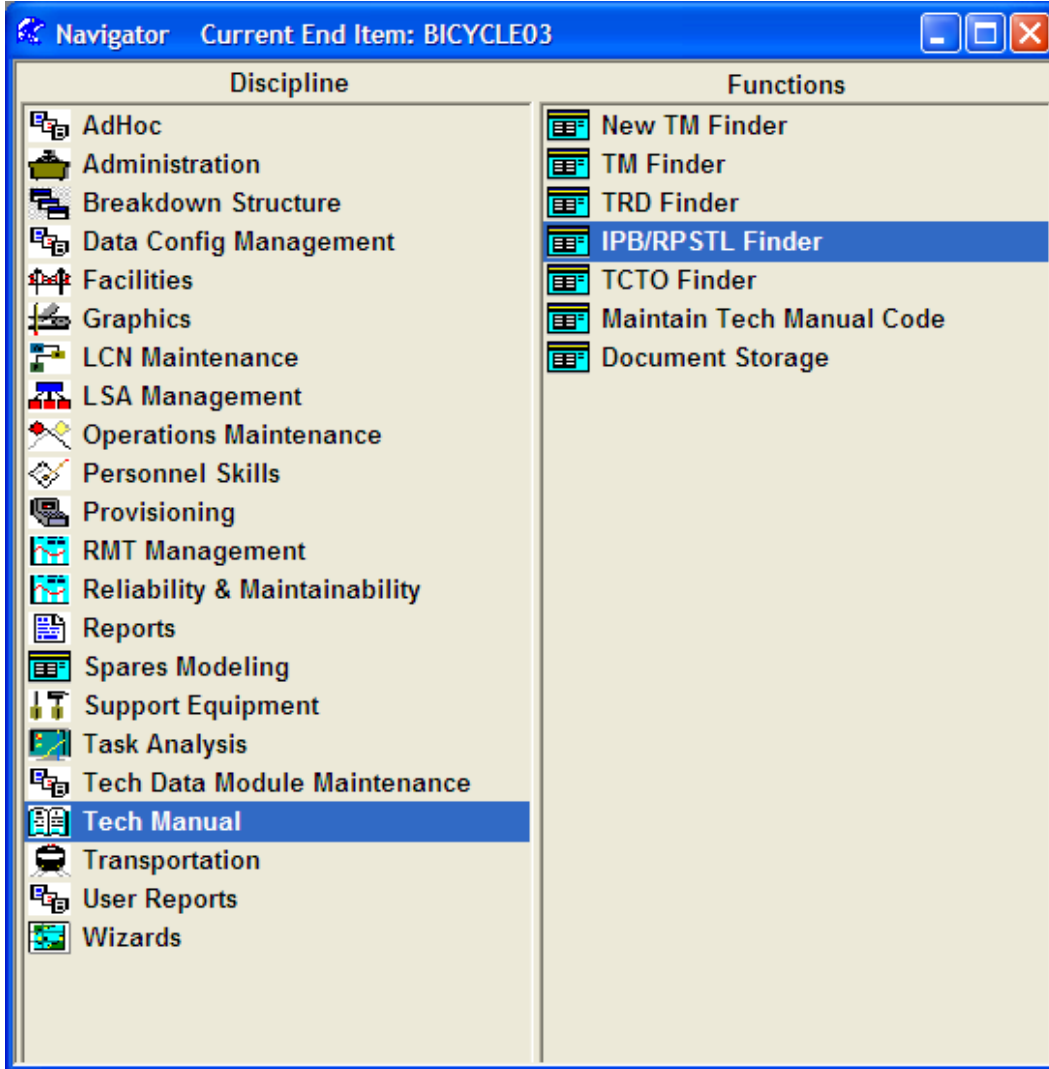


Figure 1 Navigator - IPB/RPSTL Finder

From the IPB/RPSTL Finder with the appropriate End Item selected do the following as shown in Figure 2 and described below.

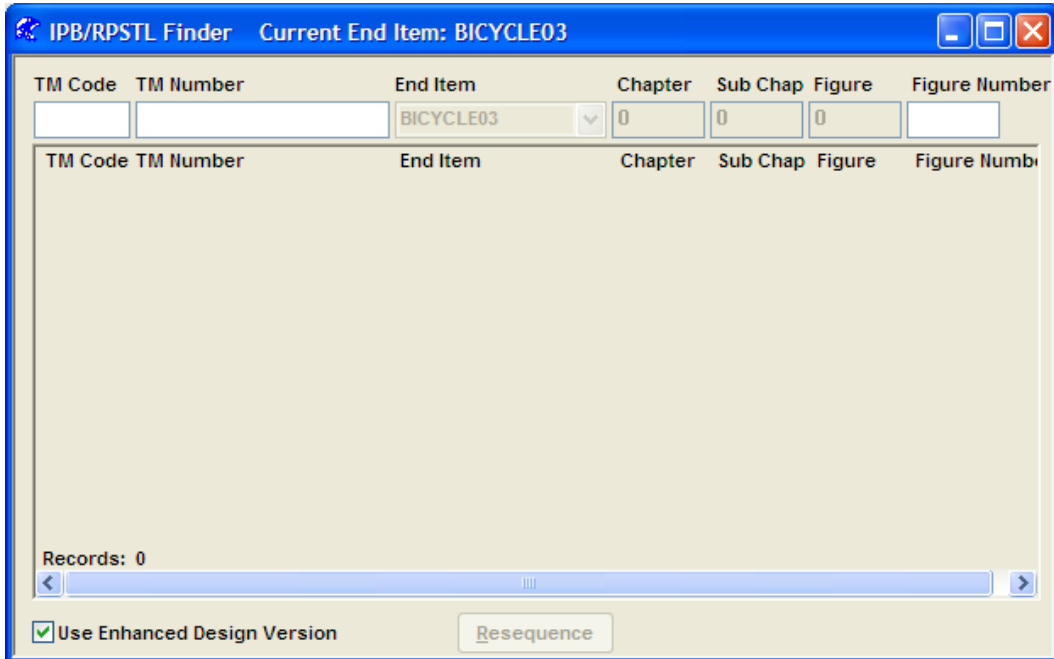


Figure 2 IPB/RPSTL Finder

- Choose the **Insert** button on the Main toolbar. The Create New IPB window is displayed as shown in Figure 3. Note: Figure 3 depicts the Create New IPB window after data has been entered:

**Create New IPB** Current End Item: BICYCLE03

Enter IPB Specific Data

IPB Chapter: 0 IPB Sub Chapter: 0 IPB Chapter Figure: 0 Figure Number: 0001  Calculate IPB Figure

UOC Selection  
 Prov UOC - (HO/XC)  Serial Number - (HN/XD)

Select Tech Manual & End Item For New IPB

Tech Manual		End Item
TM Code	TM Number	End Item
TM1	TM55-2840-950-10	BICYCLE03
TMT	TRAINING MANUAL	

Records: 2

OK Cancel Help

Figure 3 Create New IPB Window

- Enter the **Figure Number**.
- Select the appropriate **TM Code** from the Tech Manual block. (The TM Code must exist in table XI.)
- Choose the **OK** button on the Create New IPB window. The new IPB figure is added to the IPB/RPSTL Finder as shown in Figure 4.

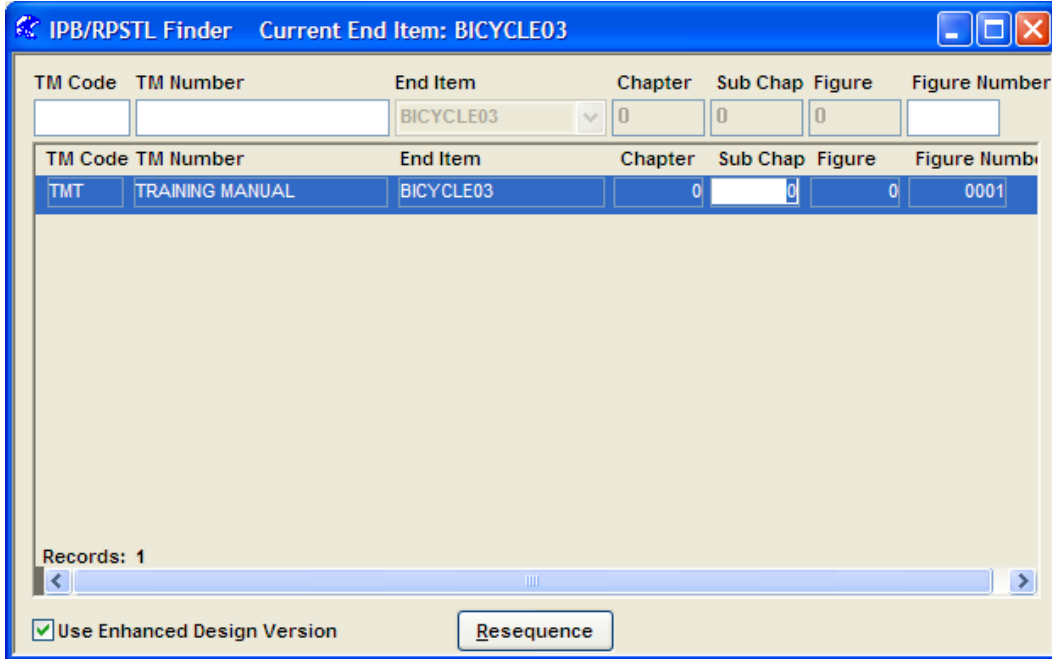


Figure 4 IPB/RPSTL Finder Showing the Added Figure

Continue to design the IPB figure by:

- With the appropriate IPB figure selected in the IPB/RPSTL Finder, choose the **Design IPB** button on the Function Specific Toolbar. The Design IPB Window is displayed as shown in Figure 5.
- Enter **Start LCN** and **Stop LCN** to define the range of LCNs to be included in the IPB. The **Start LCN Finder** and **Stop LCN Finder** buttons can be used to select these values from LCNs existing in table XB.

**Note:** MIL-HDBK-1388 states “If a start and stop LCN are selected then it will pull those LCNs that fall within that range of LCN’s selected. It is interpreted as such (Start LCN greater than or equal to LCN < Stop LCN”. A common practice would be to make your stop LCN one greater than you desire to have pulled.

- Enter a "placeholder" **Artwork ID** for the figure. Any value up to 40 characters can be used. If the IPB figure is to be a multiple sheet figure, enter a place holder for each sheet and assign a unique numeric value for the **Order**.
- Enter the title for the IPB figure in the **Artwork Title** field. The artwork title may be up to 80 characters.

- Select the number of indentures to be included in the IPB figure from the **Ind Levels** dropdown list. Up to 5 levels may be included.
- Select the LCN of the configuration item from the **Sys/End Item LCN** dropdown list. This is the LCN from table XC that will be used to determine which provisioned items from table HG make up the configuration(s) documented in the IPB figure.

The screenshot shows the 'Design IPB' window for 'Current End Item: BICYCLE03'. The window is divided into several sections:

- Header:** TM Code (TMT), TM Number (TRAINING MANUAL), End Item (BICYCLE0), Chapter (0), Sub Chapter (0), IPB Fig (0), Figure # (0001).
- Start/Stop LCN:** Fields for Start LCN and Stop LCN, with corresponding 'Start LCN Finder' and 'Stop LCN Finder' buttons.
- Artwork Finder:** A section with 'Artwork ID' (None Selected), 'Order' (0), and 'Records: 1'. It includes a 'Portrait/Landscape' dropdown (Portrait) and an 'Image Size' dropdown (A - Full Page).
- Ind Levels and Sys/End Item LCN:** 'Ind Levels' dropdown and 'Sys/End Item LCN' dropdown (BIKE).
- UOC Selection:** Radio buttons for 'Prov UOC - (HO/XC)' and 'Serial Number - (HN/XD)'. Includes an 'LCN Finder' button and a 'Bulk Item' checkbox.
- Action Buttons:** 'Include ALC', 'Exclude ALC', 'Exclude LCN/ALC', and 'Expand LCN' buttons.
- ALC Type Selection:** Two columns of 'ALC Type' dropdowns. The first column has 'ALL' selected for 'IPB End Item' and 'IPB Sub Indentured'. The second column has 'NO' selected for 'IPB End Item' and 'IPB Sub Indenture'.
- LCN and ALC Selection:** 'LCN' dropdown (None Selected) and 'ALC' dropdown.
- Start LCN Stop LCN IND:** 'Start LCN' (None), 'Stop LCN' (Selected), and 'IND' dropdown.
- Records:** 'Records: 2' for ALC Type, 'Records: 2' for ALC Type, 'Records: 1' for LCN ALC, and 'Records: 1' for Start LCN Stop LCN IND.

Figure 5 Design IPB Window

- Choose the desired **UOC Selection** (HO/XC) or (HN/XD).
- If bulk items (items identified by a "Q" in the Item Category Code field in table HG) are to be excluded, check the **Bulk Items** checkbox. (IPBs normally do not include bulk items, however, RPSTLs generally include them.)
- Choose the **Save** button on the Main toolbar. The IPB design is complete. An example IPB design is shown in Figure 6. At this time, the Design IPB Window can be closed.

**Note:** If all ALCs for the selected LCN range are not desired, the ALCs that are to be excluded must be entered under the **Exclude ALC** button. If a particular LCN/ALC combination is not desired in the IPB, the **Exclude LCN/ALC** button can be used to identify the LCN/ALC combinations to be excluded. If LCNs outside the range specified by the Start LCN and Stop LCN are to be included in the IPB, the **Expand LCN** button is used.

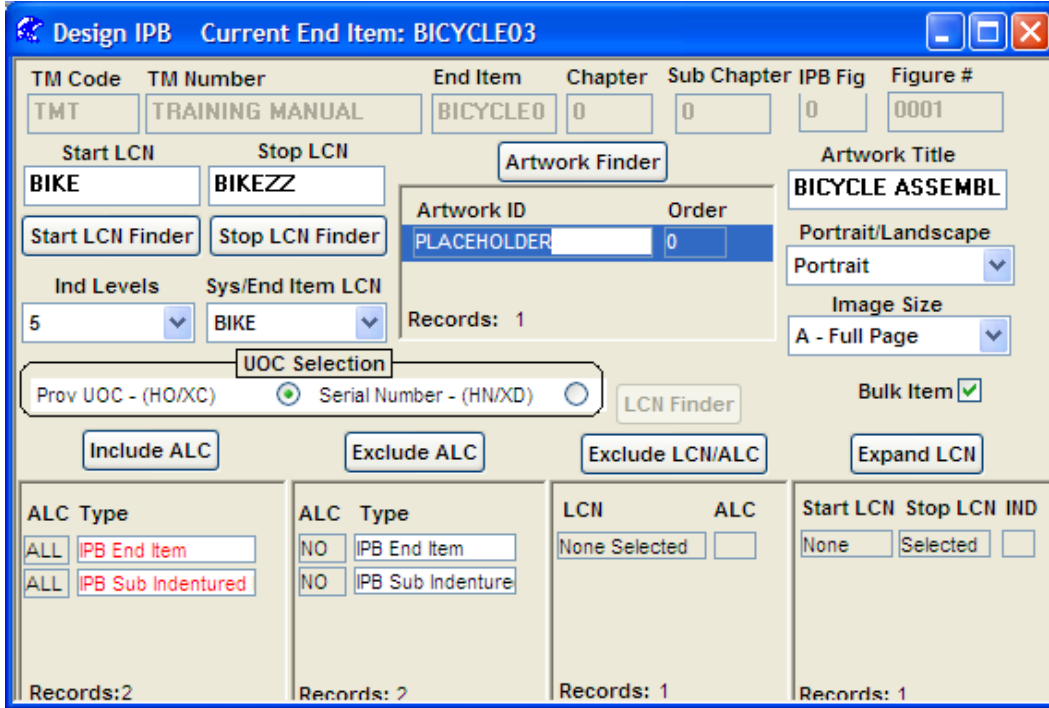


Figure 6 Example IPB Design

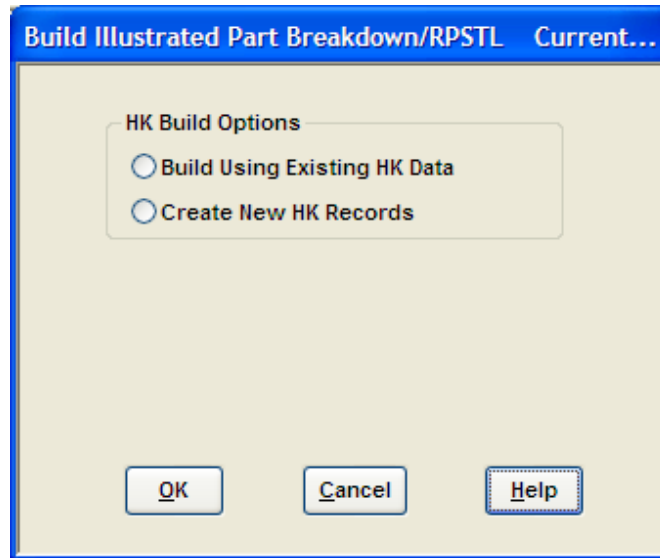


Figure 7 Build Illustrated Part Breakdown/RPSTL Window

## 1.2 BUILDING THE IPB

To build the IPB, select the IPB figure to be built from the IPB/RPSTL Finder as shown in Figure 2 and perform the following:

- Choose the **Build IPB** button on the Function Specific Toolbar. The Build Illustrated Part Breakdown/RPSTL Window is displayed as shown in Figure 7.
- To build the IPB using existing HK data, choose the **Build Using Existing HK Data** radio button. This will populate the EAGLE IPB tables with the existing HK data.
- If HK data is to be generated based on tables HA, HG, and HO, choose the **Create New HK Records** radio button. Additional selections are displayed as shown in Figure 8.

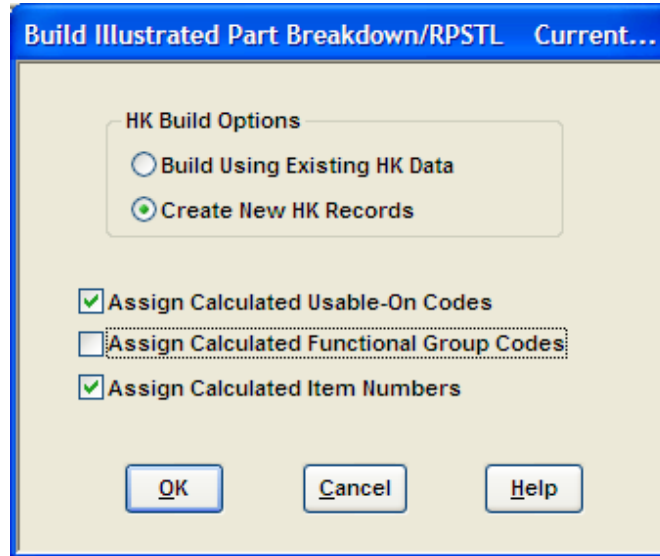


Figure 8 Creating New HK Records

- If the **Assign Calculated Useable-on Codes** checkbox is selected, IPB useable on codes (UOCs) will be calculated based on the LSAR UOCs. An "alias" of "A" will be assigned to represent the first configuration, "B" for the second configuration etc. Items used on all configurations will be assigned a UOC of "ALL", while items only used on a subset of configurations will be assigned that subset (e.g. "A", or "B", or "A", "B" or A, "C"). If the checkbox is not selected, the LSAR UOCs from table XC will be used (rather than the aliases).
- If the **Assign Calculated Functional Group Codes** checkbox is selected, functional group codes will be calculated based on LCN assignments. Functional group codes are typically used in RPSTLs but not IPBs.
- If the **Assign Calculated Item Numbers** checkbox is selected, IPB find numbers are automatically assigned. As a general rule, this checkbox should always be checked.
- When the desired selections are made, begin the IPB build by choosing the **OK** button.

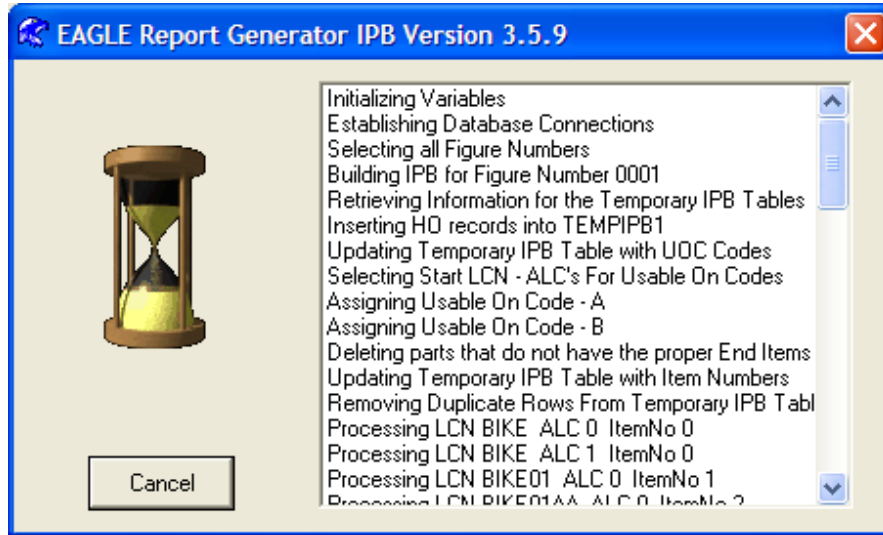


Figure 9 EAGLE Report Generator IPB Window

- The EAGLE Report Generator IPB Window is displayed as shown in Figure 9. This window will close automatically upon completion of the IPB build.

### 1.3 ADDING AN IPB DATA MODULE TO THE CSDB AND LINKING IT TO AN EAGLE IPB FIGURE

Access the Tech Data Module Maintenance Discipline from the Navigator and launch the Data Module Maintenance Function as illustrated in Figure 10.

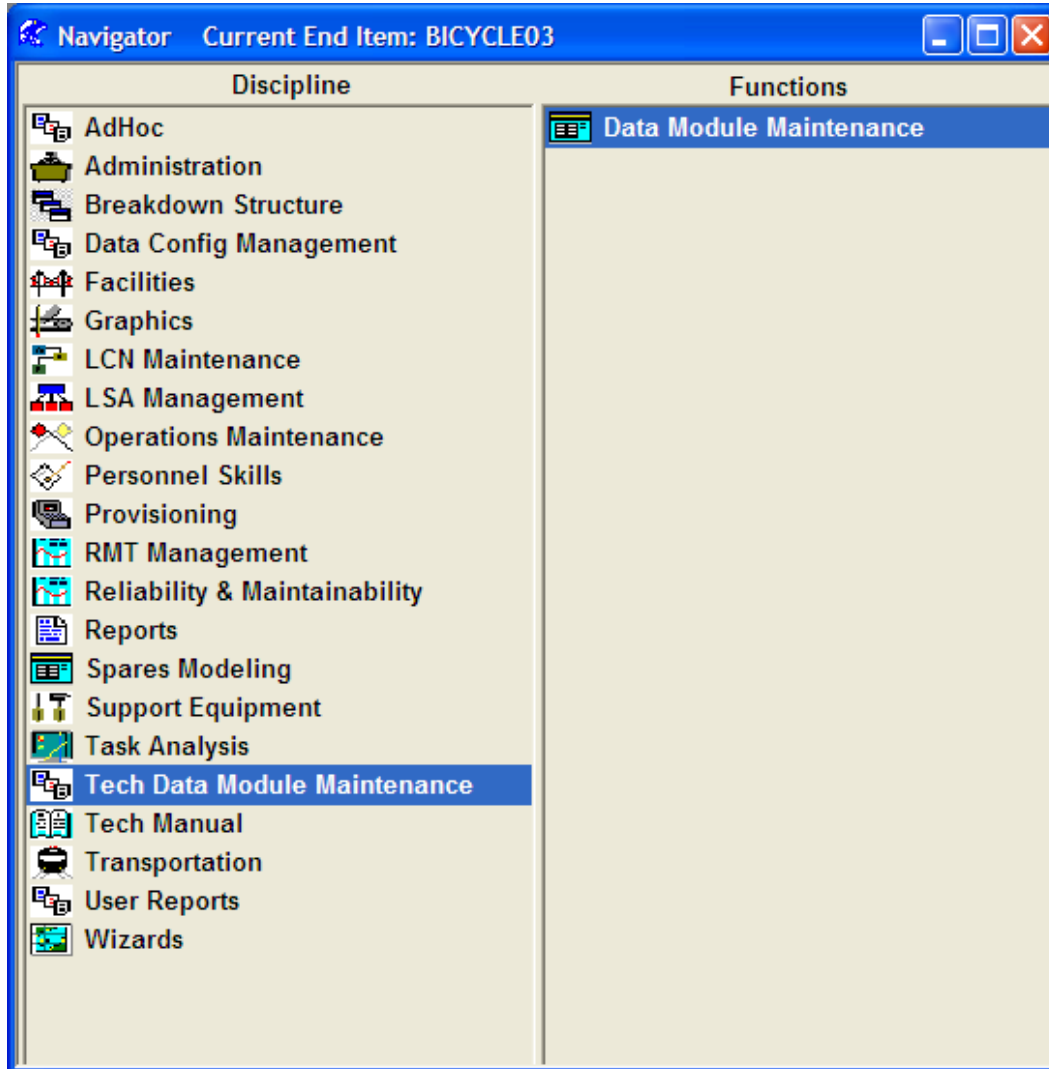


Figure 10 Navigator – Data Module Maintenance

The Data Module Maintenance Finder is displayed as shown in Figure 11.

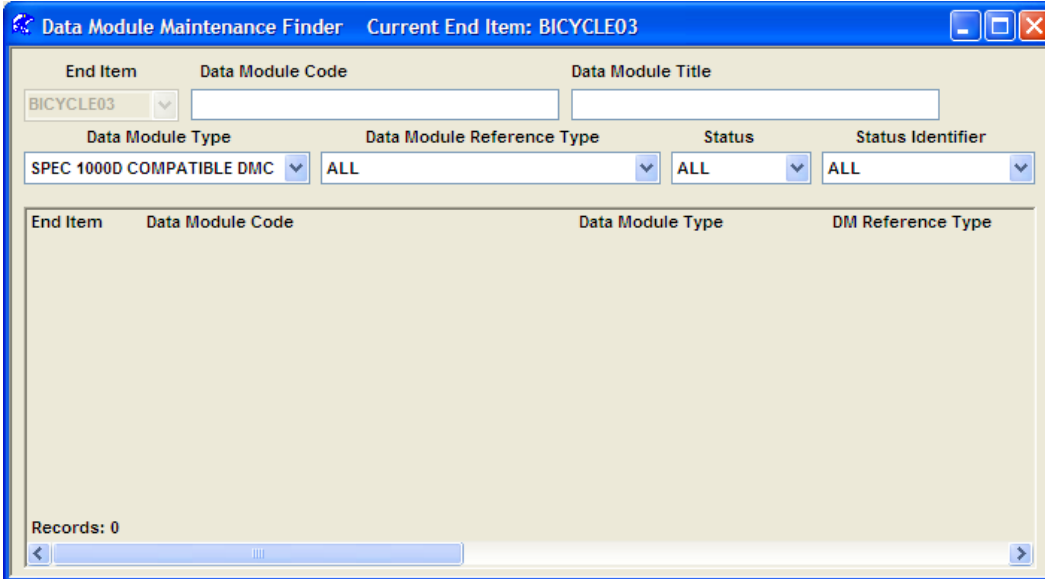


Figure 11 Data Module Maintenance Finder

### 1.3.1 Creating the Data Module

- Choose the **New DMC** button on the Function Specific Toolbar. The Create DMC Dialog box is displayed as shown in Figure 12.
- Select **IPB** from the Please Select the Data Module Type dropdown list.
- Choose the **OK** button. The LSA Control Number Data Maintenance Window is displayed as shown in Figure 13.

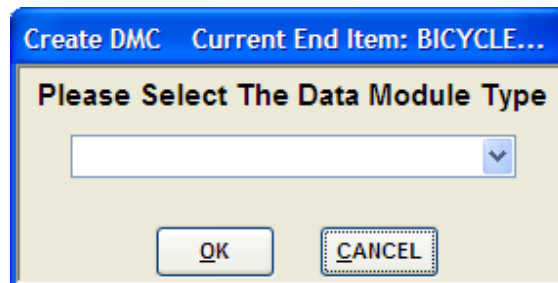


Figure 12 Create DMC Dialog Box

LSA Control Number Data Maintenance Current End Item: BICYCLE03

End Item LSA Control Number (LCN) ALC Type LCN Name

BICYCLE03 [ ] [ ] [ ] Find Doc Code

Document Code: [ ]  Only Display LCNs With A Document Code

End Item	LSA Control Number (LCN)	ALC Type	LCN Name	LCN Indenture Coc
----------	--------------------------	----------	----------	-------------------

Records: 0

< [ ] >

OK Cancel Query Insert Row Save Changes Help

Figure 13 LSA Control Number Data Maintenance Window

- Enter the LCN for the top level item in the IPB figure in the LSA Control Number (LCN) search criteria field.
- Choose the **Query** button.
- Select the LCN record for the top level item and choose the **OK** button. The Numbering System Manager is displayed as shown in Figure 14.

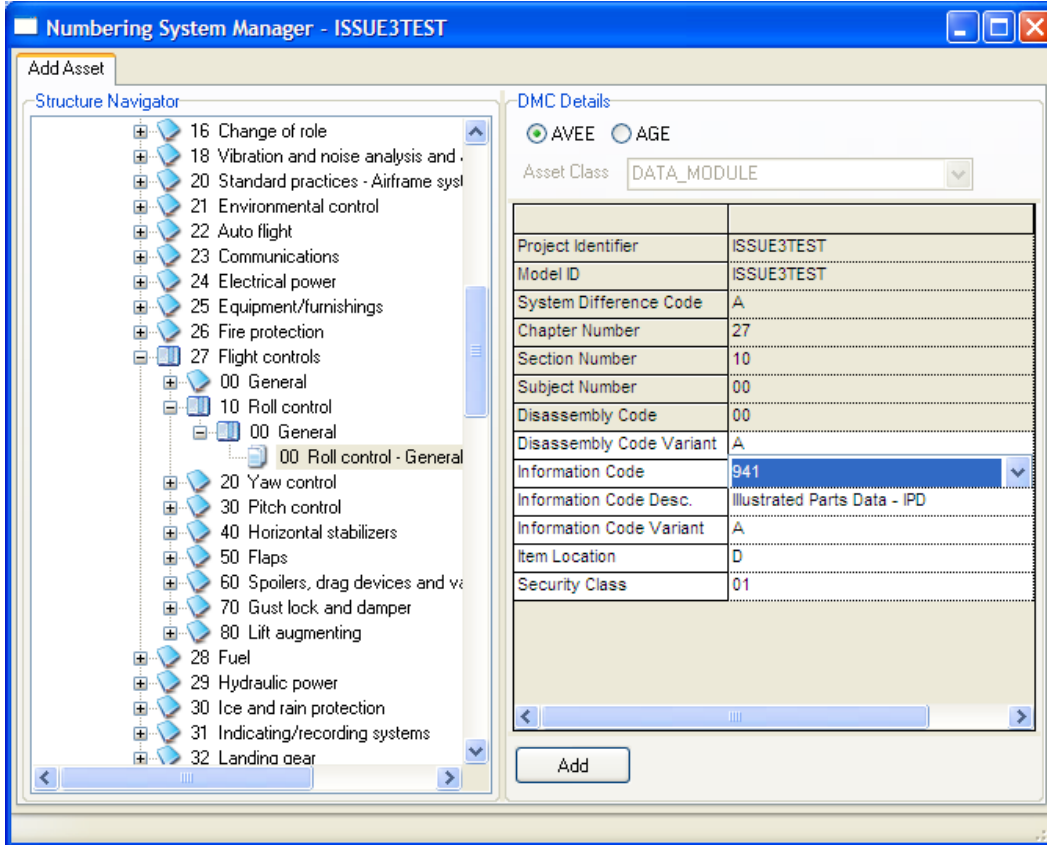


Figure 14 Numbering System Manager

- Drill down through the Structure Navigator to fill in the SNS fields of the form.
- Select '941' from the Information Code dropdown list.
- Choose the **Add** button to create the DM in the CSDB.

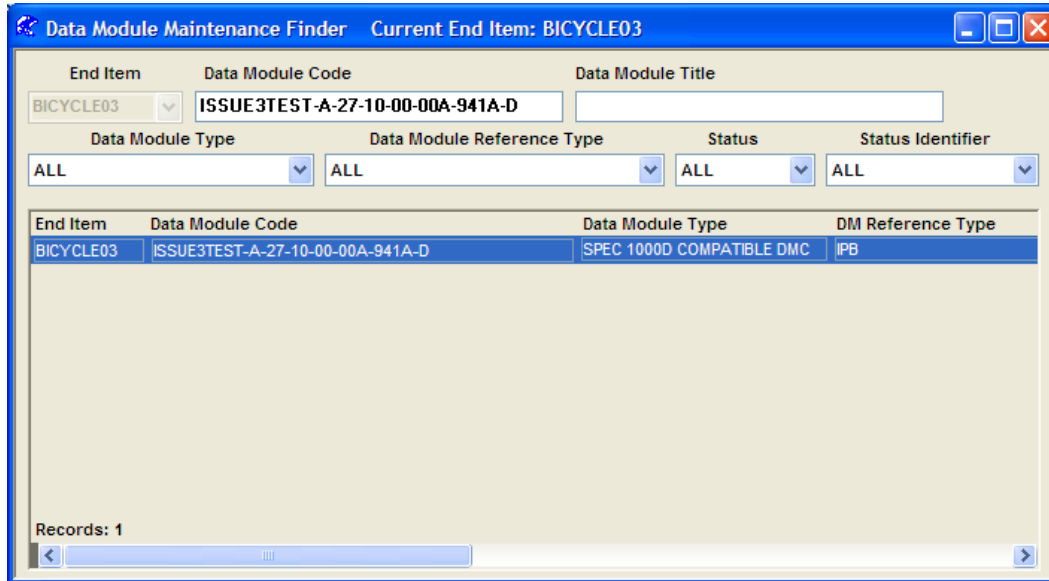


Figure 15 Data Module Maintenance Finder Showing Newly Created DM

### 1.3.2 Linking the EAGLE IPB Figure to the DM

- Select the Data Module to be linked to the IPB Figure in the Data Module Maintenance Finder as shown in Figure 15.
- Choose the **DM Maint** button on the Function Specific Toolbar. The Data Module IPB Information Window is displayed as shown in Figure 16.

The screenshot shows a software window titled "Data Module IPB Information" with a subtitle "Current End Item: BICYCLE03". The window contains a form with the following fields:

End Item	Data Module Code		
BICYCLE03	ISSUE3TEST-A-27-10-00-00A-941A-D		
Data Module Type	DM Reference Type	DM Status Flag	DM Status Identifier
SPEC 1000D COMPATIBLE DMC	IPB	[dropdown]	
Data Module Title	Reference Technical Manual and IPB Figure Number		

At the bottom center of the window is a button labeled "Find IPB".

Figure 16 Data Module IPB Information Window

- Choose the **Find IPB** button. The IPB/RPSTL Finder is displayed as shown in Figure 17.

Note: Figure 17 depicts the IPB/RPSTL Finder after the next two steps were performed.

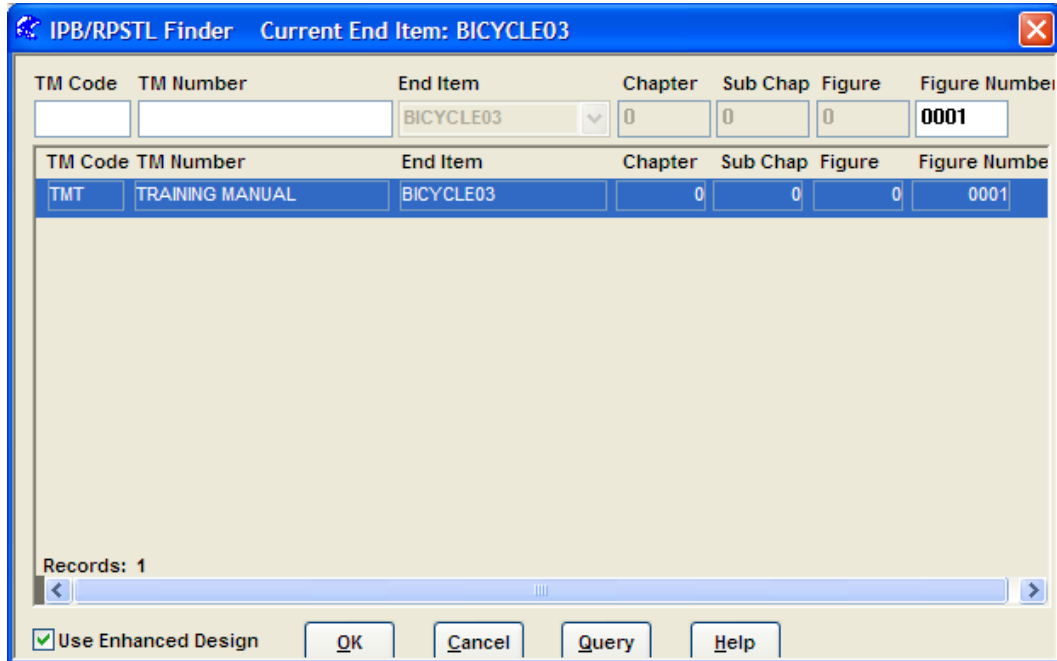


Figure 17 IPB/RPSTL Finder

- Enter search criteria to locate the desired IPB figure.
- Choose the **Query** button.
- Select the desired IPB figure and choose the **OK** button. The Data Module IPB Information Window is updated with the TM Code and Figure Number of the IPB figure as shown in Figure 18.

End Item	Data Module Code	Data Module Type	DM Reference Type	DM Status Flag	DM Status Identifier	Data Module Title	Reference Technical Manual and IPB Figure Number
BICYCLE03	ISSUE3TEST-A-27-10-00-00A-941A-D	SPEC 1000D COMPATIBLE DMC	IPB				TMT 0001

Figure 18 Data Module IPB Information Window with IPB Figure Information Added

- Enter an optional **Data Module Title** that describes the content of the data module if desired. This is not used in the DM but can be useful in querying for the DM in EAGLE when updates are required.
- Choose the **Save** button on the Main Toolbar to create the link between the EAGLE IPB figure and the Arbortext CSDB DM.

#### 1.4 RELEASING AN IPB DATA MODULE TO THE ARBORTEXT CSDB

Note: Data Modules created in EAGLE are created at 'PROPOSED' status in the Arbortext CSDB. These DMs must be acknowledged in the Arbortext CSDB by the CSDB Project Administrator (changing the status from 'PROPOSED' to 'PENDING') before the DM can be released.

- Choose the Execute button to enable the **Release DM** button
- Select the DM to be released in the Data Maintenance Finder as shown in Figure 19.

The screenshot shows the 'Data Module Maintenance Finder' window with the title bar 'Current End Item: BICYCLE03'. The search criteria are as follows:

End Item	Data Module Code	Data Module Title
BICYCLE03	ISSUE3TEST-A-27-10-00-00A-941A-D	

Filter settings:

Data Module Type	Data Module Reference Type	Status	Status Identifier
ALL	ALL	ALL	ALL

Search Results Table:

End Item	Data Module Code	Data Module Type	DM Reference Type
BICYCLE03	ISSUE3TEST-A-27-10-00-00A-941A-D	SPEC 1000D COMPATIBLE DMC	IPB

Records: 1

Figure 19 Data Module Maintenance Finder – Releasing a Data Module

- Choose the **Release DM** button on the Function Specific Toolbar. The Release Data Module Window is displayed as shown in Figure 20.

**Release Data Module**

End Item	Data Module Code	Seq. No.
BICYCLE03	ISSUE3TEST-A-27-10-00-00A-941A-D	001
End Item	Tech. Manual Code	Figure No.
BICYCLE03		
Data Module Status	Task Config. Status	
Release Date	Release Identifier	Release Authority
12/5/2008	INITIAL	
Release Comments		
DM created for the EAGLE IPB DM manual.		
Data Module Type	Release Type	
3.0 - S1000D Issue 3.0	<input checked="" type="radio"/> Draft <input type="radio"/> Formal	

OK Cancel Help

Figure 20 Release Data Module Window

- Enter the following optional data:
  1. Release Identifier
  2. Release Authority
  3. Release Comments
- Select the **Draft** radio button to release the DM at WIP status or **Formal** to release the DM at QA Required.
- Choose the **OK** button to release the DM.

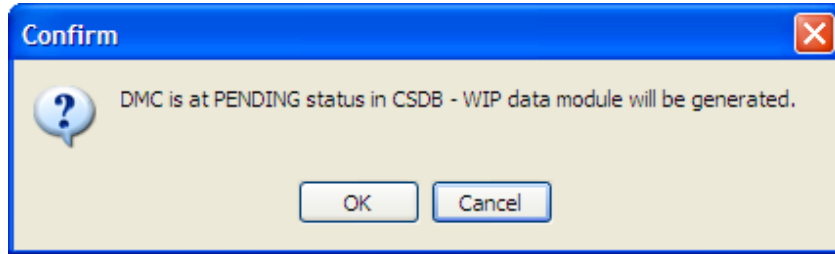


Figure 21 Confirm Release

- As stated earlier, the DM may not be releasable, depending on the Primary Status in the CSDB. A dialog such as that shown in Figure 21 will inform the user if the DM release can continue.
- Choose the **OK** button on the Confirm dialog box (Figure 21) to continue. The IPB DM Release proceeds as shown in Figure 22 and Figure 23.

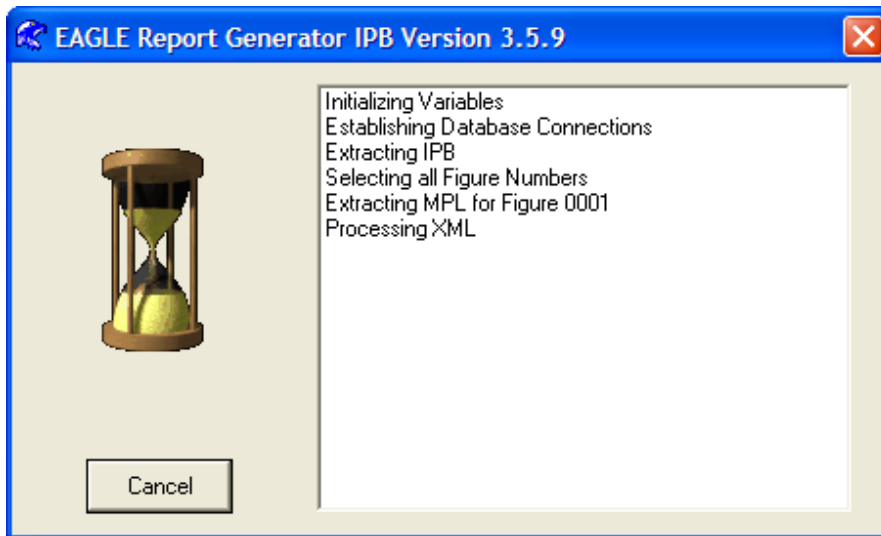


Figure 22 EAGLE Report Generator IPB – DM Release

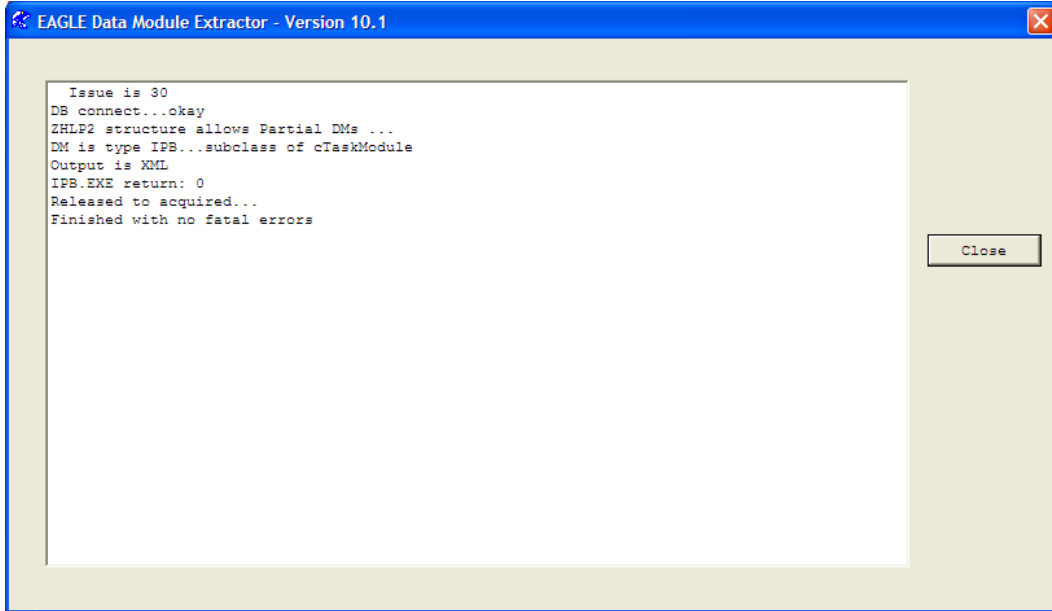


Figure 23 EAGLE Data Module Extractor

Note: The following steps are performed in the Arbortext CSDB for S1000D application to link the Information Control Number(s) (ICNs) for the illustrations used.

- Right click on the data module in Arbortext CSDB for S1000D and select **Author >> Demand Graphics** as shown in Figure 24. The Analysis for DMC window is displayed as shown in Figure 25. Note the ICN of 'PLACEHOLDER'.

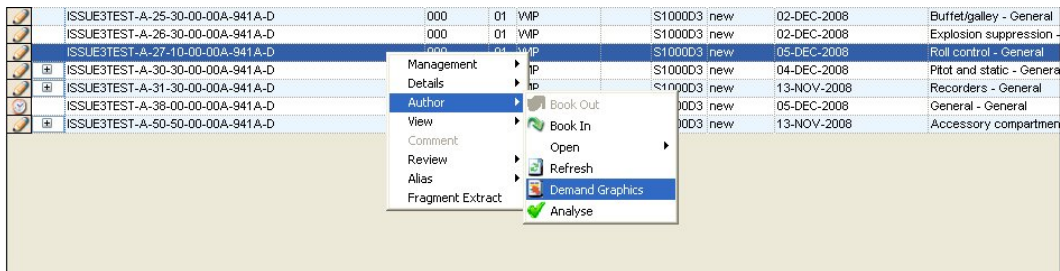


Figure 24 Demanding Graphics in Arbortext CSDB for S1000D

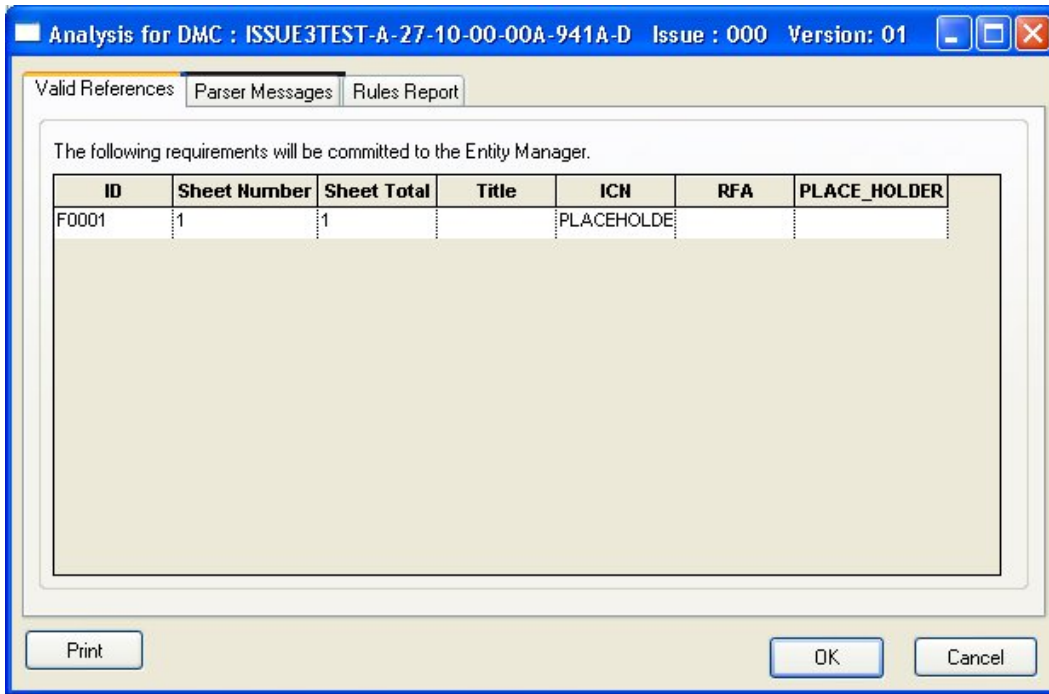


Figure 25 Analysis for DMC Window

- Choose the **OK** button to close the Analysis for DMC Window.
- Right click on the data module in Arbortext CSDB for S1000D and select **Author >> Assign Existing Entity** as shown in Figure 26. The Assign Entity Window is displayed as shown in Figure 27.

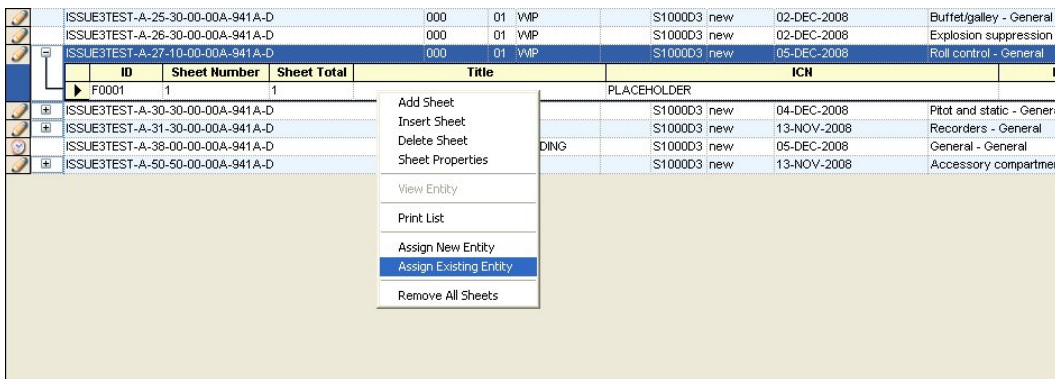


Figure 26 Replacing the Placeholder with the Correct ICN

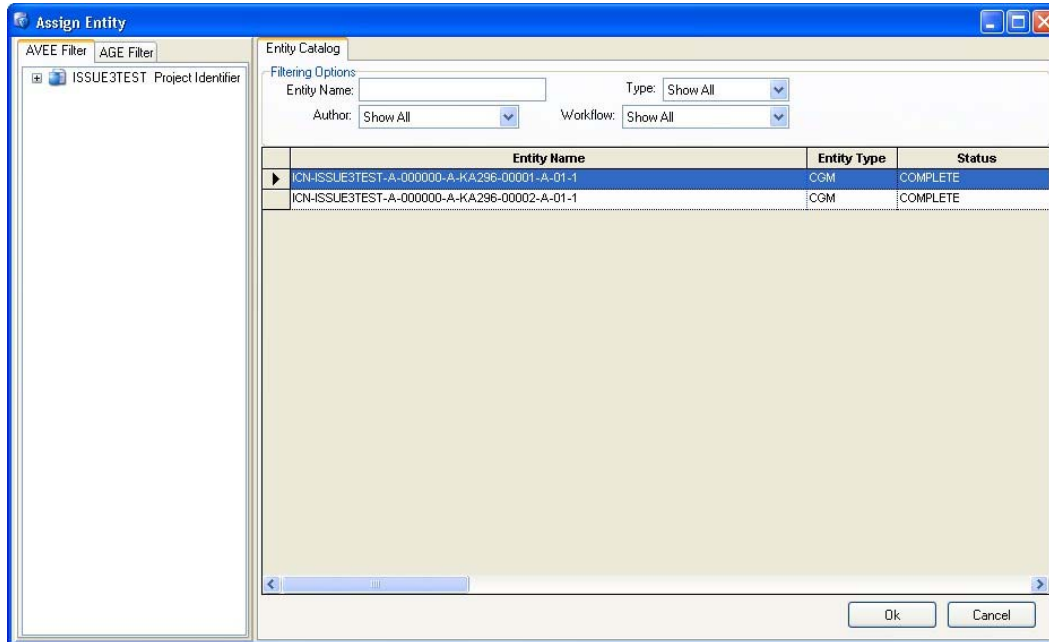


Figure 27 Assign Entity Window

- Select the correct entity and choose the OK button.

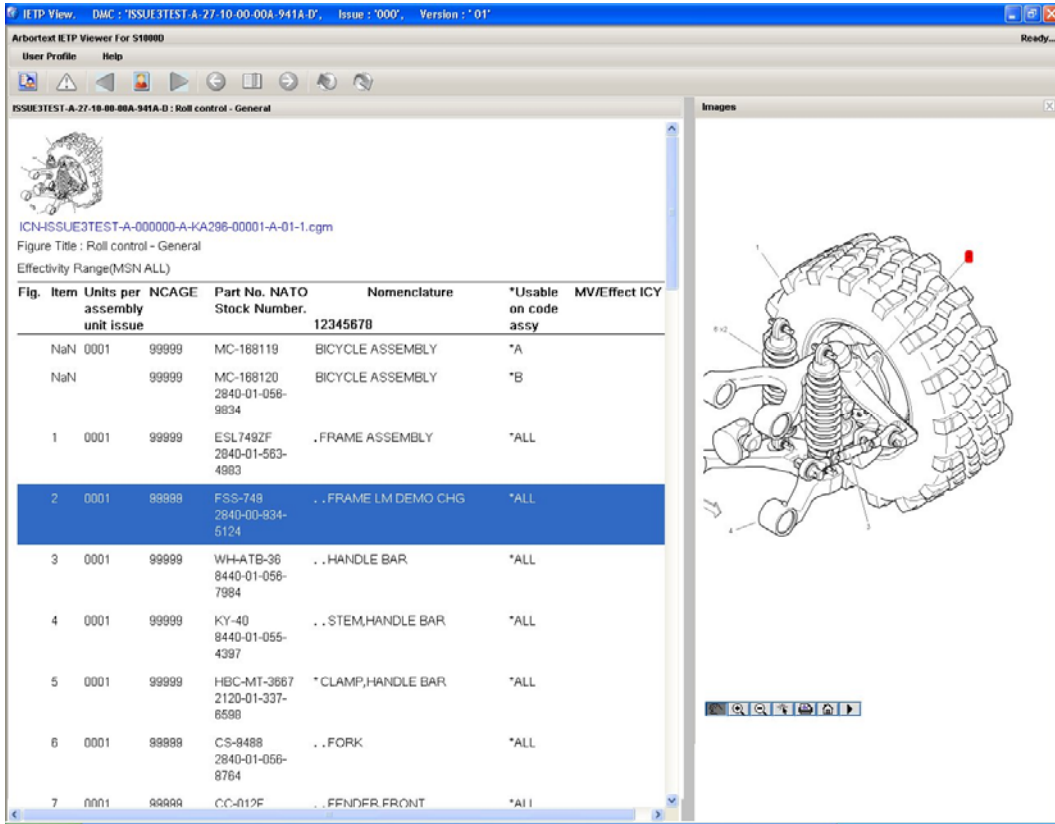


Figure 28 The IPB Data Module Previewed as an IETP

Figure 28 shows the data module as previewed from the Arbortext CSDb for S1000D.





***NOTES***

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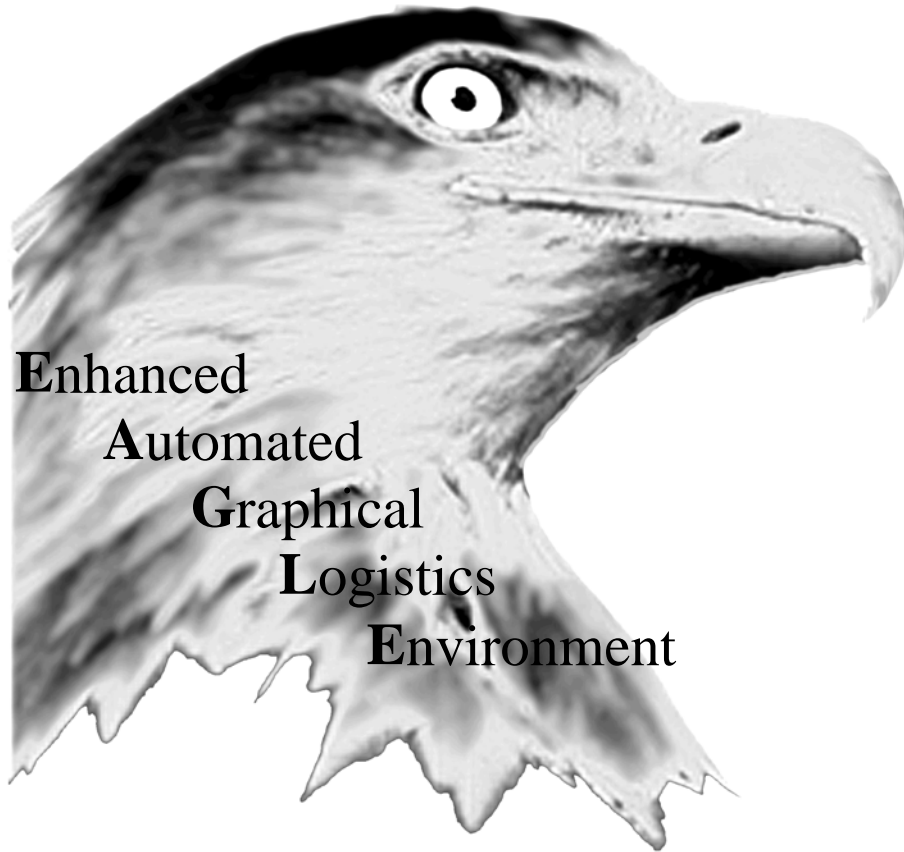












**Enhanced  
Automated  
Graphical  
Logistics  
Environment**

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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