Meridian Administration Tools

MAT ESN Analysis and Reporting Tool

User Guide

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ESN Analysis and Reporting Tool

Electronic Switched Network (ESN) is the Meridian 1's powerful private network application. The ESN Analysis and Reporting Tool (ESN ART) is a MAT application designed to assist you in configuring, analyzing, and managing large and complex ESN databases.

ESN ART allows you to retrieve the ESN configuration from a Meridian 1, and convert the overlay-based data into a PC database. Using the Windows user interface, you can easily view, modify, and print the data. The PC based data can then be transmitted back to the Meridian 1.

About this user guide

This user guide is intended to provide you with an introduction to the MAT ESN ART application as well as an overview of its major functions.

Conventions used in this user guide

This user guide uses the following terms:

- *Computer system* refers to the hardware and software of an IBM-PC™ or 100% compatible PC.
- *Windows* refers to the Microsoft family of graphical user interface (GUI)-based operating systems.
- *Mouse* refers to any standard PC pointing device. Common mouse actions include *point, click, right-click* and *double-click.*
- Standard Windows terminology includes: *icon, window, dialog box* (or *dialog*) and *menu.*

- Angle brackets denote a single keyboard key. For example, <Esc> denotes the Escape key, labeled Esc on PC keyboards. Angle brackets with multiple keys denote keyboard keys to use simultaneously. For example, <Ctrl-Alt-Del> denotes the key sequence for rebooting a PC.
- **This font** is used to designate buttons, menu choices and information you are to enter.

Help

This user guide does not discuss each ESN ART function and command in detail. It only discusses the major functions and how they are accessed. For detailed information on each ESN ART function, use the on-line Help function. You can use the Help function to obtain help for topics either directly or via its index and word-search functions. While running ESN ART, you can obtain context-sensitive help on any topic you require by simply clicking **Help** from a specific dialog or window.

To obtain help for a topic, click **Help** from the currently selected dialog or window. This will access the Windows Help function and display context sensitive help information on the current topic.

Once you have accessed Help, use it to scroll through the other ESN ART help topics, search for a specific topic or print the help information.

To view a list of Help topics for ESN ART, click **Contents** from the Help drop-down menu. Choose from one of the items in this list to load the Help file and display its information.

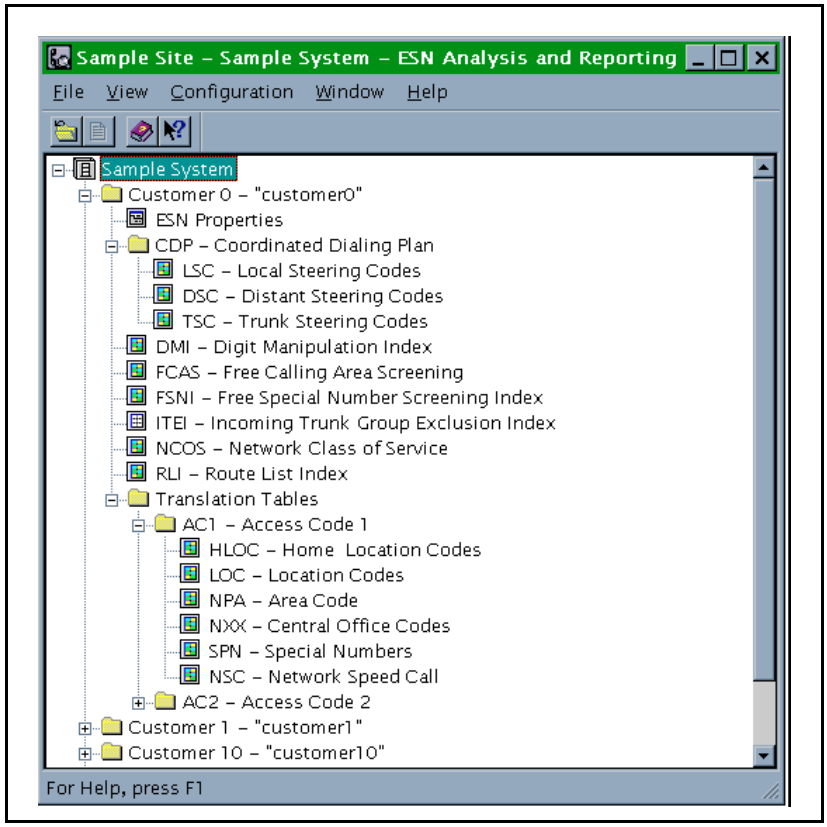
ESN ART allows you to manage the ESN data quickly and easily in the following ways:

- **ESN data retrieval** — You can retrieve ESN data blocks from the Meridian 1 overlays, and ESN ART converts and stores the data in a PC database. You can then view and print the data.
- **ESN data installation** — You can clone the PC-based ESN data from an existing switch to install a new ESN configuration on a similar switch.
- **ESN data modification** — You can add, change, or delete the retrieved or cloned ESN data using the ESN Object Managers (windows that simplify ESN data definition). You can then transfer the modified ESN data from MAT on the PC to the Meridian 1.
- **ESN data reporting** — You can create reports ranging from basic data to data analysis reports. You can send these reports to the screen, to a printer, or to a file.
- **Export ESN data** — You can export Report data to a file. Various file formats are supported, for example, Excel or comma separated values (CSV) format.
- **ESN global change data** — You can make global changes to these six ESN reference objects: DMI, FCI, FSNI, ITEI, RLI, and ROUT.

  Note: ESN data refers to ESN data blocks in LD86 (except Network Attendant Service), LD87 and LD90.

From the System window, double-click the ESN icon to launch the ESN ART application. The ESN ART window uses the standard MAT tree control and displays a folder for each Meridian 1 customer (as defined in the MAT System Window properties or retrieved from the Meridian 1). See Figure 1.

Figure 1
ESN ART window



Each customer folder expands to show a list of ESN object manager icons. Each icon represents a specific type of ESN data or object, such as Digit Manipulation Indexes (DMI). To display or hide the ESN application list, double-click the customer folder icon or single-click the plus sign [+] or minus sign [-].

Using ESN ART

In order to edit the ESN data for a customer, double-click on that customer's folder. If ESN data has been defined for that customer, a list of ESN object manager icons appears in the tree under the customer. An object manager is a window that contains a list of instances of the particular ESN object (for example, a list of DMI numbers and their attributes). Double-click on a particular ESN object manager icon to view and manage the associated ESN data.

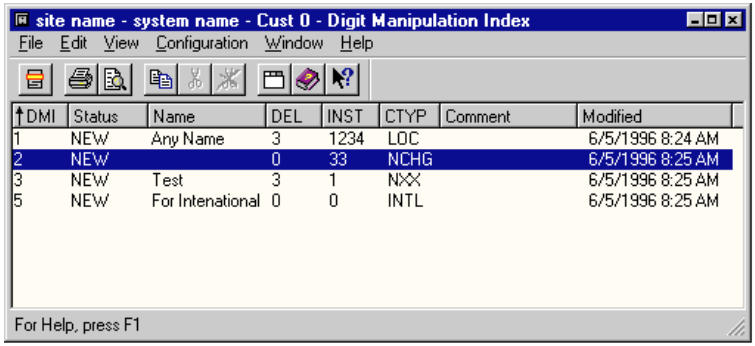
If a customer does not have any ESN data defined on the MAT PC, then the customer folder expands to show the ESN Setup Wizard. This wizard helps you to create the ESN data for the customer. See "ESN Setup Wizard" on page 37.

Working with ESN Object Managers

The ESN data is made up of many types of objects, such as Route List Indexes (RLI), Digit Manipulation Indexes (DMI), and Location Codes. In a typical ESN installation, most types of objects have many instances (for example, there are several instances of DMI number for the DMI object).

ESN ART uses object managers to assist you in viewing and managing all ESN objects. For example, double-click the **DMI** icon to open the DMI object manager. The DMI object manager provides a list of each DMI number defined for the customer and the values of the various DMI attributes. See Figure 2.

Figure 2
ESN object manager window (DMI in this example)



Each object manager is a separate window (using the standard MAT list control) containing the list of instances of the ESN object. The number and content of the columns varies for each object manager. Typically, there is one column for each property of the object. Most properties correspond to an overlay prompt.

In our example, the DMI list manager shows you the list of all DMI numbers and their attributes. To edit the attributes of a particular DMI number, double click on that line in the list. The *Property Sheet* (Figure 3) for that DMI number appears. This is the dialog box that you use to change the values of the DMI feature prompts.

Using Object Manager features

You can perform the following actions in an object manager:

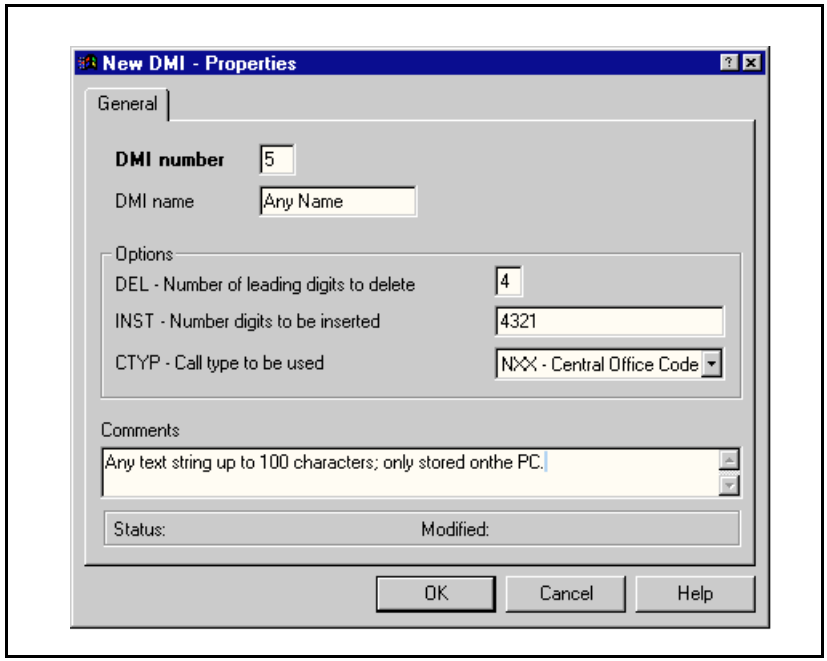
- Double click on an object to view and modify the object's properties.
- Add, change, delete, and undelete the selected objects using the EDIT pull down or pop up menus.
- Change the status of selected objects to NEW, TRN, OUT, or CHG using the EDIT pull down or pop up menus. Use this function only if the status between the Meridian 1 and the PC is "out-of-synch."
- Click on a column title to sort the column. Click again to reverse the order of the sort; an arrow icon in the column title indicates ascending (up arrow) or descending (down arrow) sort.
- Resize the window and columns.
- Use a horizontal scroll bar to see all the columns (if required).
- Select all or some rows and perform the following operations:
  - — Copy the text of each selected row to the clipboard.
  - — Delete the selected objects.
- Print all objects using the basic report for the object manager.

Each object manager in ESN ART works as described here. Some object manager windows have more than one list displayed in the window, and some property sheets have more that one tab, but the principal is always the same.

Working with Property Sheets

Each instance of an ESN object in the object manager's list has an associated property sheet. The property sheet is a dialog box that allows you to modify the ESN data for the object. See Figure 3.

Figure 3
ESN Property sheet (DMI in this example)



The property sheet contains all attributes of an object. Each attribute typically corresponds to a prompt in an ESN overlay. (If the associated X11 Package is not equipped, its controls are disabled in the property sheet.)

> ***Note:*** The **Name** and **Comments** fields are exceptions to this convention. Any information that you enter into these fields is optional, for your reference only, and is saved only in the PC database. This data cannot be transmitted to the Meridian 1.

Some ESN property sheets have more than one tab. Click on a tab to edit the ESN data in that tab.

Property Sheet Controls

The attributes of an object are represented as Windows controls, such as edit boxes and drop-down list boxes. For example, **Yes/No** type prompts are represented as check boxes. The names of prompts appear next to the controls. Property sheets share the following controls:

- The appearance of the property sheet for adding a new object is different from the appearance when changing an object. The title bar is different and the object ID (for example, DMI number) is disabled when you are changing an object.

  Note: You must delete an object and re-add it to change the object ID.

- Edit boxes are used for Object IDs and names; multi-line edit boxes are used for the **Comments** field and some repeating data such as lists of allowed dialed digits. Mandatory edit boxes have **bold** label text. Optional edit boxes typically have a default value. Edit boxes have a tool tip pop-up which describes the allowed values (example: “Enter a value between 1 and 32”)
- Check boxes represent **Yes/No** type prompts, where checked means **Yes**.
- Drop down list boxes present a list of choices. These correspond to prompts with multiple responses. You can type the first letter to make a selection. The text in drop down list boxes include the actual prompt response followed by a short description. For example:
  - NPA - Area Code
  - NXX - Central Office Code
- Each control has an associated help description. Click on a control and press **<F1>** for help on the selected control. This displays the description on the associated prompt in the I/O guide help.
- Most ESN objects also have a **Last Modified** date field and a Synchronization **Status** field. These fields are displayed as read-only text in the property sheet. The **Status** field can have the following values in MAT:

— NEW — added on the PC but not the Meridian 1. Deleting a new object removes it from the list because this change does not need to be synchronized to the Meridian 1. Changing a **NEW** object only changes the **Modified** timestamp (that is, it is still **NEW** until synchronized with the Meridian 1). See "Synchronizing the MAT ESN database and the Meridian 1" on page 23.

— TRN — The object has been synchronized with the Meridian 1. The object has been successfully transmitted to or retrieved from the Meridian 1.

— CHG — The object has been changed on the PC but not on the Meridian 1.

— OUT — The object has been deleted on the PC but not on the Meridian 1. The object remains on the PC until successfully removed from the Meridian 1.

Note: The initial state of all objects after being cloned from another customer is **New**.

Example

In our DMI example, you might wish to change the Call type (CTYP prompt). The following example explains editing the CTYP prompt for a particular DMI:

1 In the DMI list, double-click the DMI instance that you wish to change (this opens the property sheet for that DMI).

2 Move to the **CTYP** list box, and select a new value from the list of appropriate values.

3 Click **OK**—the data is stored in the MAT database ready for transmission to the Meridian 1. (You can click **Cancel** to close the property sheet without changing the ESN data.)

4 Later, when you synchronize the data between MAT and the Meridian 1, this change is made in the Meridian 1 ESN data. See "Synchronizing the MAT ESN database and the Meridian 1" on page 23.

Note: This document does not cover the details of each object type because each object manager and property sheet is designed to be fully documented in the on-line help. You can also request **What's This?** help for any field or button while using ESN ART.

Shortcuts

To open a property sheet for an object, you can double-click on the object in the list in the object manager window. Alternately, right-click the object to open the pop-up menu, and select **Properties** to open the property sheet for that object.

The right mouse button opens a popup menu that allows you to add, delete, and undelete an object, open the object's property sheet, and get help on the object.

Defining ESN Properties

Some ESN data is defined once per customer. The **ESN Properties** property sheet allows you to configure this data in a property sheet (no object manager is needed, since there is only one instance of these values for the customer.) To open the **ESN Properties** property sheet, select **ESN Properties** from the tree.

The following tabs make up the **ESN Properties** property sheet:

- **General Tab** —The General tab contains data from ESN Features sections in Overlay 86.
- **Limits Tab** — The Limits tab contains data from ESN options in Overlay 86.
- **TOD Schedules Tab** — The TOD Schedules tab contains Time of Day Schedules and Extended TOD schedules from Overlay 86.
- **Network Control Tab** —The Network Control tab contains data from ESN Network Control section in Overlay 87.
- **NCOS Map Tab** — The NCOS Map tab contains data from Network Class of Service mapping from Overlay 87.

ESN Global Change

Global change allows you to change all references to an ESN object. For example, use global change to find all places DMI 3 is used and optionally change it to DMI 11.

Example: Changing references to a DMI

1 Select Global Change in the Configuration menu.

2 Select DMI in the first list box.

3 Enter the DMI number to be changed and its new number.

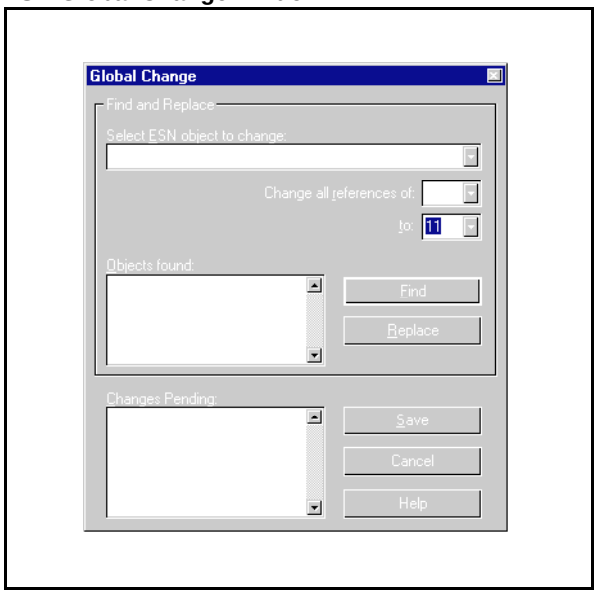
4 Click Find. This generates a list of ESN objects using the DMI number. DMIs occur in RLEs, HLOCs, LSCs, NPAs, NXXs, and SPNs.

5 Click Replace. This performs the change in memory and adds the change to the Changes Pending list box. The DMI itself is not changed.

6 Repeat the Find and Replace as desired.

7 Click Save to save the changes. The Save cannot be undone. Click **Cancel** to close the window without saving the changes.

Figure 4
ESN Global Change window



Synchronizing the MAT ESN database and the Meridian 1

When you have finished defining the ESN data for a customer, you are ready to transmit the data to the Meridian 1. Alternately, you may be ready to retrieve data from a Meridian 1 to bring your MAT PC up-to-date. This is called *synchronizing* the data—guaranteeing that the ESN data in MAT and on the Meridian 1 are "in synch."

Use the **Synchronize** menu to select **Transmit To Meridian 1** or **Retrieve From Meridian 1**. You have the option of scheduled or immediate transmission or retrieval. You also have the option to view the last transmit or retrieve.

> ***Note:*** In order to synchronize data, the TTY port on the Meridian 1 must be configured with a user type of **SCH**.

Preparing the ESN ART Environment for Synchronization

Follow these guidelines to assure seamless synchronization:

- The customer data, X11 release, and X11 package information stored in the MAT System Property Sheet must be correct. You can define this data manually in the System Property sheet under the System Data tab or by using the **Update System Data** item in the System window.

  Note: **Update System Data** retrieves the list of customers from the Meridian 1. This does not include the UserID and password for the customer. Before retrieving or transmitting data, ensure that the correct UserID and password are defined in the MAT System Properties.

- When copying an ESN database, if the X11 release and packages are different between MAT and the Meridian 1, the ESN data may be impacted as follows:

  — Data is lost if the package is not enabled on the destination

  — Default data is used if the package is not enabled on the source

- ESN ART does not retrieve LD16 route data. Transmission errors will occur if you enter invalid route numbers.

- NORTEL recommends that you validate ESN data before you transmit it to the Meridian 1.

Validating ESN Data

Whenever you transmit ESN data to the Meridian 1, the ESN ART software will automatically examine the data to ensure it is valid. However, it is a good practice to validate the data before transmitting. From the **Configuration** menu, select **Validate ESN Data**. The results of the validation process appear in a log file and are displayed in Windows Word Pad.

Retrieval and Transmission

After you have completed the ESN ART environment for synchronization, you can retrieve ESN data from the Meridian 1, or transmit ESN data to the Meridian 1.

Synchronization — Retrieval

Follow these steps to retrieve data from the Meridian 1:

1 Launch the ESN application from the site and system you want

2 From the ESN main window, select the customer from which you want to retrieve the data

3 Select **Synchronize**, **Retrieve Now** or **Scheduled** from the File menu

The Synchronization application is launced and begins the retrieval process. When the retrieval is done, the Synchronization application disconnects from the Meridian 1 and parses the downloaded ESN data. Select **Update DB** to store the parsed ESN data into the PC database.

> ***Note:*** Selecting **Update DB** will delete all existing ESN data for the selected customer before saving the new parsed data.

All of the new data objects have the status TRN after the database has been updated indicating the data on the PC database and the Meridian 1 is synchronized. The data can now be modified using the list managers and property sheets, then transmitted back to the Meridian 1.

Synchronization - Transmit

Follow these steps to transmit data on the PC database to the Meridian 1:

1 Launch the ESN application from the site and system you want

2 From the ESN main window, select the customer from which you want to retrieve the data

3 Select **Synchronize**, **Transmit Now** or **Scheduled** from the File menu

The Synchronization application is launched and begins the transmit process. It begins by loading ESN data for the selected customer and validates all the ESN data objects (on PC side). The Synchronization application only transmit ESN data objects which have the status OUT, NEW, or CHG. However, not all data objects are transmitted and updated in the same manner. Depending on the status and the data objects, they are transmitted to the Meridian 1 differently. Other data objects which have the TRN status are not transmitted to the Meridian 1. They remain unchanged on the PC database.

ESN Data Block

ESN data block is transmitted in different order when it has the status OUT or NEW. If the ESN data block has the OUT status, it is deleted from the Meridian 1 last because the Meridian 1 does not allow deletion of the ESN data block when there are data remaining in the ESN overlays (86, 87, 90). This also means that the Synchronization application must successfully delete (from the Meridian 1) all ESN data for the selected customer, to be able to successfully delete the ESN data block. However, if an error occurred while attempting to delete all the ESN data, the Synchronization application will not attempt to delete the ESN data block from the Meridian 1.

If the ESN data block has the NEW status, it will be transmitted twice. The first time, the NEW response (to an REQ prompt) is used to add the new ESN data block. However, the Meridian 1 does not ask for the NMAP and the ETOD prompts when a NEW response is used, but does so for a CHG response. So the ESN data block is transmitted a second time using the CHG response in order to transmit all of the NMAP and ETOD.

CHG Status

Depending on the prompt groups, the transmit behaves differently for the status CHG. For the simple prompt groups, when their data objects have the status CHG, they are transmitted to the Meridian 1 using the CHG response which is straight forward. For the special (more complex) prompt groups, they are first deleted from the Meridian 1 using the OUT response and then added (includes the new changes) back to the Meridian 1 using the NEW response. These special prompt groups include: FCI, FSNI, LOC, NPA, NXX, and SPN.

When these data objects are transmitted to the Meridian 1, they are first deleted from the Meridian 1, and if the delete was successful, their status is immediately changed from OUT to NEW. Then they are added back to the Meridian 1. If that is also successful, their status is immediately changed from NEW to TRN. This way, if the PC looses connection to the Meridian 1 or there is a system failure between the delete and the add, the next transmit will add these prompt groups (with the NEW status) back to the Meridian 1.

Status Updates and Transmission Errors

During transmission of the ESN data objects to the Meridian 1, the Synchronization application will update the status of each prompt group accordingly. The table below lists synchronization status updates for before and after a succesful transmission:

Table 1
Synchronization status updates

Synchronization status before transmission	ESN Data	Synchronization status update on MAT PC after transmission
OUT	all	Remove from database
NEW	all	TRN
CHG	all (except special prompt groups)	TRN
*1. CHG (OUT)	special prompt groups only	NEW
*2. CHG (NEW)	special prompt groups only	TRN

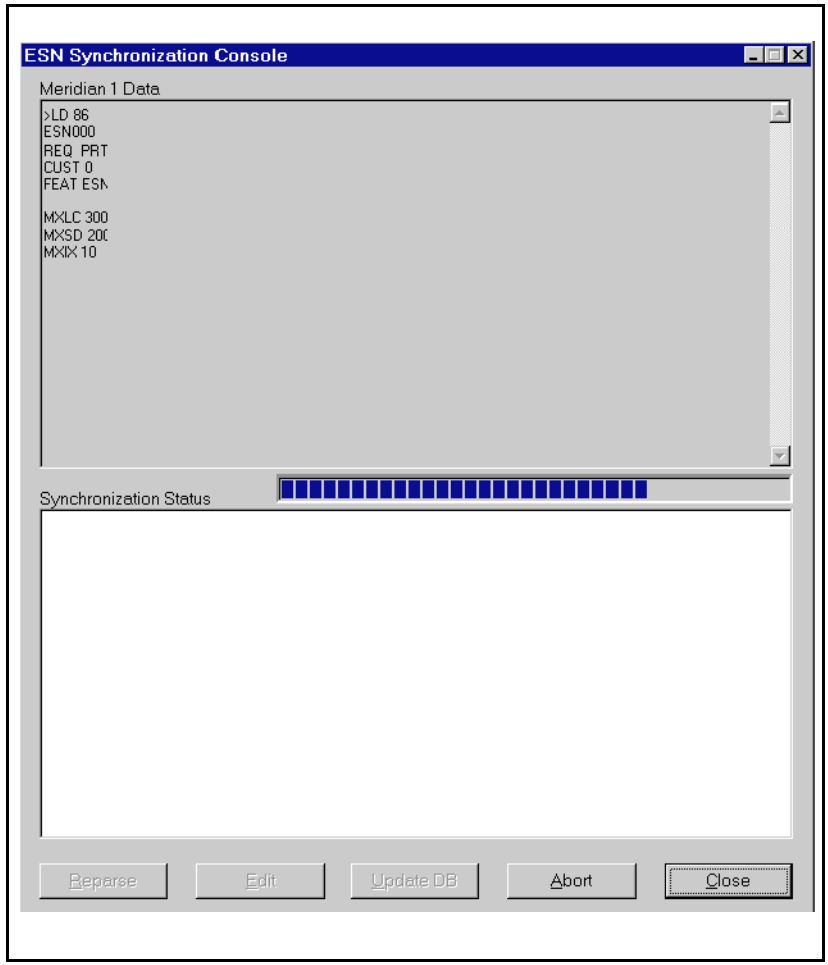
* The items indicated by this symbol actually have one status CHG, but they are transmitted in two steps: deleted from Meridian 1 using the OUT response, and added back to the Meridian 1 using the NEW response. For each step completed successfully, the synch status is changed and updated to the PC database

If the Synchronization application detects errors during transmission of ESN data, it will not update the status for that data. The status will remain unchanged as prior to transmission, and the errors are logged in a file.

Console Window

Once synchronization starts, the ESN synchronization console window displays the interactions between the MAT PC and the Meridian 1 overlays (86, 87, and 90).

Figure 5
Synchronization console window



The top part of the console window—the Meridian 1 Data section—allows you to view the interactions between the PC and the Meridian 1. For example, when retrieving ESN data from the Meridian 1, the printout from the ESN overlays appears in this window.

Synchronization Log Files

The bottom part of the console window, the Synchronization Status section, list the errors found during transmission, retrieval, or parse operations. When retrieving the data from the switch, the interactions include many print sequences. This process has the potential to pick up transmission errors or TIMxxx (time messages) generated by the Meridian 1. All transmission or retrieval information is saved on the MAT PC in the following synchronization files (XX represents the customer number):

Nortel\Common Data\[sitename]\[systemname]\
ESN\ESNRetrieveXX.dld

Nortel\Common Data\[sitename]\[systemname]\
ESN\ESNTransmitXX.log

If you encounter retrieval or transmission problems, you can view the retrieve or transmit log file to find the basis for the errors.

Login Log File

The login information in the Console window can help you determine the reasons for login failures. This information is saved in the following login file:

Nortel\Common Data\[sitename]\[systemname]\ESN\SyncLogin.log

Exiting ESN ART or MAT While Synchronizing

If you exit the ESN ART application while synchronizing data, the synchronization console stays open to allow synchronization to finish.

If you exit MAT while synchronizing data, a confirmation window lets you know that synchronization is still in progress. You are given the option to abort the synchronization or to allow synchronization to finish. To protect data integrity NORTEL strongly recommends that you allow synchronization to finish normally.

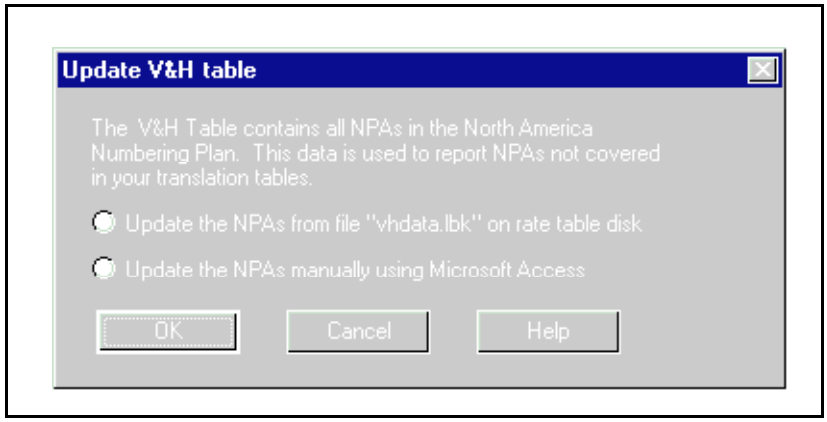
Updating the V&H Table

The V&H table contains all North American NPAs and the associated state or province. This information is used by the analysis report which checks for NPAs not covered in the NPA object manager.

Select Update V&H table from the File menu to open the following dialog box which allows you to:

- Import new NPAs from the Call Accounting rate table disk
- Manually update the NPAs via Microsoft Access

Figure 6
Update V&H table dialog box



Importing NPAs

When you select the "Update the NPAs from file 'vhdata.lbk' on rate table disk" option from the Update V&H table dialog box, the standard File Open dialog box displays. Select the vhdata.lbk file (usually on a floppy disk). ESN ART then reads the NPAs and updates the appropriate datafile. This operation takes a minute or so. You can click **Cancel** to close the dialog box without updating the datafile. A backup of the datafile is made in case of a PC crash during the operation. If this occurs you can try the update again, or rename the old database file (called vhDB.mdb) in the ESN Program folder.

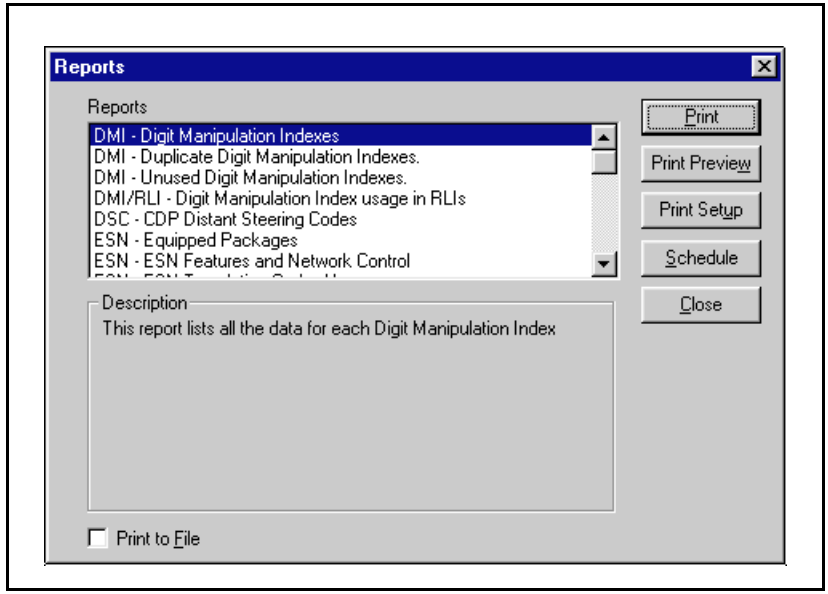
Manually Updating NPAs

When you select the "Update the NPAs manually using Microsoft Access" option from the Update V&H table dialog box, ESN ART simply opens the database file using Microsoft Access. You can then add, change, or delete NPAs as desired and save the file. This operation fails if the PC does not have Access.

Printing ESN Reports

ESN ART includes many pre-defined reports to help you in your work. In the **File** menu, select **Reports**. The Reports window allows you to select one or more reports, configure print settings, and schedule the report(s) for a particular time. You can print more than one Basic report at a time.

Figure 7
Reports window



The following pre-defined reports are available:

- Basic Reports
  - DMI - Digit Manipulation Indexes
  - DSC - CDP Distant Steering Codes
  - ESN - ESN Properties
  - ESN - Equipped Packages
  - FCAS - Free Calling Area Screening Indexes
  - FSNI - Free Special Number Screening Indexes
  - HNPA/HLOC- Translation Tables Summary
  - ITEI - Incoming Trunk Exclusion Indexes
  - LOC - Location Codes
  - LSC - CDP Local Steering Codes
  - NCOS - Network Class of Service
  - NPA - Numbering plan Area Codes
  - NSCL - Network Speed Call
  - NXX - Central Office Translations
  - RLI - Route List Indexes
  - SPN - Special Number Translations
  - TSC - Trunk Steering Codes

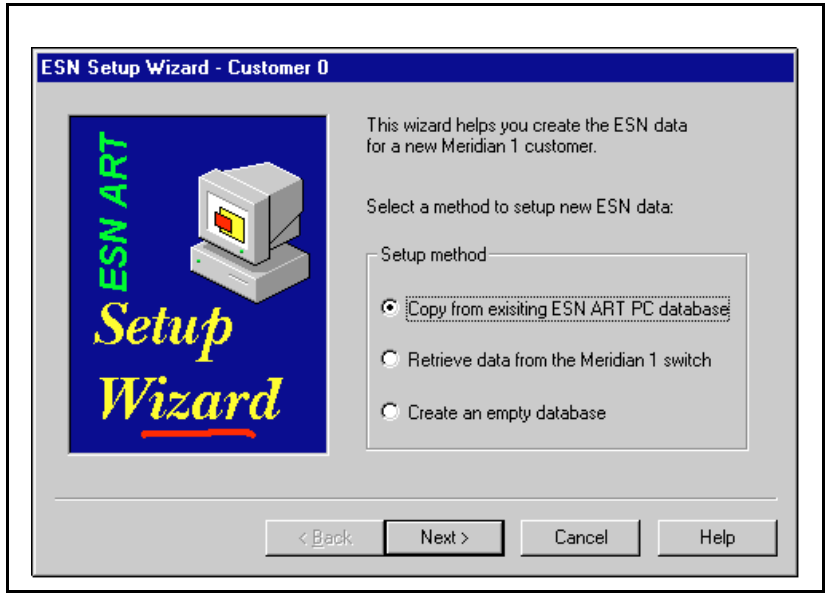
- Analysis Reports
  - DMI - Duplicate Digit Manipulation Indexes
  - DMI - Unused Digit Manipulation Indexes
  - DMI/RLI - Digit Manipulation Index usage in RLIs
  - ESN - Translation Codes Usage
  - NPA - Area Codes not covered in translation tables
  - NPA - Area Codes with no associated SDRR codes
  - NPA - Invalid Area Codes in FCAS and Translation Tables
  - RLI - Route List Index usage in NPAs, NXXs, SPNs
  - RLI - Route List Index TOD Schedules
- Grouping Reports
  - OVL86 - ESN Basic reports on Overlay 86
  - OVL87 - ESN Basic reports on Overlay 87
  - OVL90 - ESN Basic reports on Overlay 90
  - Special - All ESN specialized analysis reports

ESN Setup Wizard

The ESN Setup Wizard helps you to set up the ESN database for a Meridian 1 customer. In the Wizard's first page, you select one of the following methods for creating a database:

- Copy from an existing ESN ART PC database
- Retrieve data from the Meridian 1 switch
- Create an empty database

Figure 8
ESN Setup Wizard



Click **Next** to move to the second page. The second page depends on your choice in the first page, as follows:

- **Copy from an existing ESN ART PC database:** This option displays a tree with all sites, system, and customers with a PC-based ESN database. Select the customer with the data you want to copy and click **Finish**. This creates the ESN database for the customer. All ESN objects are given a status of **New**. You can then modify the data, such as changing the Home Area Code, and then transmit the data to the Meridian 1 using the Transmit Now or Scheduled option in the File Menu.

  Note: When copying an ESN database, if the X11 release and packages are different between MAT and the Meridian 1, the ESN data may be impacted as follows:

  — Data is lost if the package is not enabled on the destination

  — Default data is used if the package is not enabled on the source

- **Retrieve data from the Meridian 1 switch:** This option retrieves the ESN data from the Meridian 1. This is the same as using the **Retrieve Now** or **Schedule** option in the **File** menu.

- **Create empty database:** This option creates an empty database. Before the database is created, you must fill in the mandatory fields (such as the Home Area Code) in the ESN Properties.

The ESN Setup Wizard is designed to be documented fully in the on-line help. If you have any questions while using the Wizard, click the **Help** button. You can also request **What's This?** help for any field or button.

ESN ART software dependencies

Table 2 shows all object managers in the ESN window tree. Some items appear only if the associated X11 package is equipped on the Meridian 1. The system must have the multi-customer package for the customer folders to appear.

Table 2
X11 Packages Required for the ESN ART Object Managers

ESN Object Manager	X11 Package
Customer x - Customer Name	cust
ESN Features and Network Control	bars/nars
CDP - Coordinated Dialing Plan	cdp
• LSC - Local Steering Codes	cdp
• DSC - Distant Steering Codes	cdp
• TSC - Trunk Steering Codes	cdp
DMI - Digit Manipulation Index	bars/nars
FCAS - Free Calling Area Screening Index	bars/nars
FNSI - Free Special Number Screening Index	fnp

Table 2 (Continued)
X11 Packages Required for the ESN ART Object Managers

ESN Object Manager	X11 Package
ITEI - Incoming Trunk Group Exclusion Index	bars/nars
NCOS - Network Class of Service	ncos
RLI - Route List Index	bars/nars
Translation Tables	bars/nars
• HNPA/HLOC - Home NPA and Location Codes	bars/nars
• LOC - Location Codes	bars/nars
• NPA - Area Codes	bars/nars
• NXX - Central Office Codes	bars/nars
• SPN - Special Numbers	bars/nars
• NSCL - Network Speed Call	nars

Meridian Administration Tools

ESN Analysis and Reporting Tool

User Guide

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