Meridian Administration Tools

Station Administration

User Guide

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Introduction

The Meridian Administration Tools (MAT) provide the Meridian 1 system administrator with powerful tools for maintaining and updating the Meridian 1 system. The MAT system consists of MAT Common Services and several MAT applications, each of which provides specific system management capabilities. This *User Guide* describes the MAT Station Administration application.

Overview

The Station Administration application helps administer databases that define end-user stations (telephones) on Northern Telecom Meridian 1 systems. The Station Administration application contains the following modules:

Station Administration

This module allows you to change station data on an individual or selected group basis.

CPND

Use this module to manage Call Party Name Display (CPND) data.

List Manager

Use this module to manage data for Speed Call, Group Call, and Group Hunt lists.

Report Generator

This module allows you to create and produce standard or customized reports.

Conversion Utility

This module provides import and file rebuild capabilities.

Communications

This module synchronizes MAT and Meridian 1 data (copies MAT data to Meridian 1 or copies Meridian 1 data to MAT).

MAT Users

The MAT system is designed for managers of telecommunications equipment and authorized Northern Telecom distributors. This guide is intended for users who have a working knowledge of Meridian 1 systems and general telecommunications concepts.

This guide assumes you are familiar with PC systems and the Microsoft Windows™ environment. You should be familiar with the Windows environment before attempting to use the MAT system.

Conventions used in this manual

This manual uses the following terms:

- *Computer system* refers to the hardware and software of an IBM-PC™ or 100% IBM compatible PC.
- *Disk* refers to a high capacity hard disk, required by the MAT system.
- *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,* and *double-click*.
- Standard Windows terminology includes *icon, window, dialog box,* and *menu*.

This manual uses the following typographical conventions:

- Angle brackets denote a single keyboard key. For example, <Esc> denotes the Escape key, labeled Esc on PC keyboards. A series of angle brackets 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 menu selections, buttons, and commands to enter.

Getting started

Before you can start using MAT Station Administration, you must retrieve station, customer, and other associated data files from the Meridian 1. The following summarizes the steps to follow before you can use MAT Station Administration.

Ensure site and system information is defined

The properties of sites and systems must be defined before you can use Station Administration. See the *Common Services User Guide* for detailed procedures.

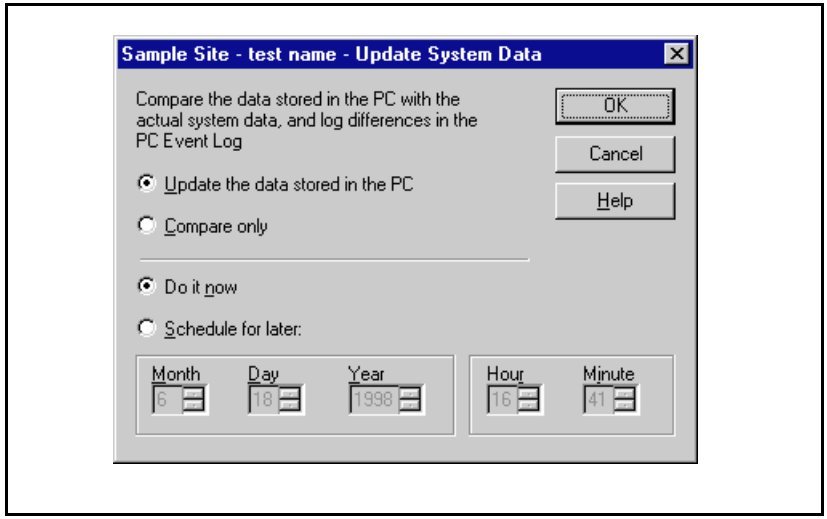
- Define site properties in the New Site Properties sheet.
- Define system properties in the System Properties dialog box. Be sure to completely define information in the following tabs
  - — General tab: include system name and short name
  - — Communications tab: include at least one communications profile
  - — Applications tab: be sure to enable the Station Administration application and a corresponding communication profile
  - — Customers tab: be sure to add at least one customer (usually Customer 0) and define this customer's properties to include a customer name, user ID, and password. You'll have to define unique names, IDs and passwords for each customer added.
  - — Numbering Plans tab: define a numbering plan for each customer using the Numbering Plans tab found under the Customer Properties sheet. Station Administration uses information entered here to provide a list of available extensions (DNs) and will validate the extensions against the applicable feature (e.g., ACD DN).

Once defined, sites and systems appear as icons in the MAT Navigator and System windows.

Update the system data

Open the System window. Click on the system icon and choose Update System Data. The following dialog box appears. See Figure 1.

Figure 1
Update system data dialog box



Click **OK** to update the system data.

Retrieve customer station data

Open the System window. View the applications available for the system you have defined and open the Station Administration application under the Stations icon. With the Station Administration window open, retrieve station data for each customer on the system. Choose **Synchronize-Retrieve-All** from the menu bar.

Repeat this step for each customer on the system.

Retrieve Reserve Unit TNs

With the Station Administration window open, retrieve Reserve Unit TN information. Choose **Synchronize-Retrieve-Reserve Unit TNs**. The Synchronization window appears. Click **OK** to begin retrieval.

Retrieve CPND configuration

Open the System window. View the applications available for the system you have defined and open the CPND application under the Stations icon. The CPND Name window appears listing names of users on the system. Choose **View-CPND** from the menu bar. The CPND window appears.

Choose **Synchronize-Retrieve-Specify** from the menu bar. The Call Party Name Display Retrieve window appears. Enter the customer number. Click **OK**. The Synchronization window appears. Click **OK** to begin retrieval.

Retrieve CPND names

With the CPND window open, choose **View-CPND Name**. The CPND Name window appears. With the CPND Name window open, retrieve CPND data for each customer on the system. Choose **Synchronize-Retrieve-All** from the menu bar. The Synchronization window appears. Click **OK** to begin retrieval.

Repeat this step for each customer on the system.

Additional considerations

While getting started with Station Administration, you will be communicating with the Meridian 1 system. For further information, see “Communicating with Meridian 1” on page 157.

Retrieving information from large systems can be time consuming and affect negatively system performance. You can use the Scheduler utility to plan when to perform these tasks, usually during hours when the number of users on the system are low, to minimize the effect of this operation on the system’s performance.

Station Administration

Before using MAT Station Administration, you must install and configure the software. Refer to *MAT Common Services User Guide* for installation instructions.

Overview

MAT Station Administration supports creation, maintenance, change, and reporting of single and multi-line station data and Call Party Name Display (CPND) information. Station data defines the setup for each user (telephone) connected to the Meridian 1 system.

Station data can be collected from the Meridian 1 system, or can be created within MAT. You can change this data within MAT and upload it to update the Meridian 1 database.

Each system has a number of stations. You can set up each station individually. In practice, many stations will have features in common. All features of any station can be set individually, or in groups with common criteria. The Station Administration module lets you create many stations with identical features using templates. However, those features that can be considered unique for a station (such as DN, TN, name, and location) are accessible through a dialog that graphically represents the appearance of the instrument at that station. All other features are accessible from this dialog through function buttons.

Station Data Considerations

You should be aware of the following considerations when operating the Station Administration module:

Location

The MAT application uses one field (Location) in the station database to identify and index a station record. Station data records are stored and retrieved by the value in this field. Since this is the primary identifier for a station within MAT, each station must be assigned a unique Location value. A new station cannot be created in MAT until you assign a unique Location value. Furthermore, Location is the only station record field that is required by MAT—see "DES" below. MAT validates this field during data entry and will not allow non-unique values or no value.

The Location field is not stored in the Meridian 1 system. Data retrieved from Meridian 1 containing stations not currently defined in MAT will have the fully qualified Terminal Number field value (with dashes for separators instead of blanks) assigned to the Location field. You can edit this value to conform with your Location value rules.

DES

The DES field is a required field for station data residing on the Meridian 1. It is possible to create station data within MAT that has no DES field value (This 1-6 character designator value can be assigned through the Administration feature of the Features function in Station Administration). In such cases, MAT attempts to assign the first 6 characters of the Location value to DES. If this value contains non-alphanumeric values MAT leaves the DES field blank (Location can contain all Windows-acceptable characters, but DES can have only letters and numbers).

Any station with no DES value will cause an error during transmission of MAT data to the Meridian 1. The Validation utility checks the DES and any other field values that can cause transmission failures. Refer to "Station Data Validation" on page 65.

Meridian 1 station data retrieved from a system will always have a DES value.

Sync Status

The Station list includes the current Synchronization status. Values include:

- **NEW**: a station that has been created on MAT but not yet transmitted to the Meridian 1 system.
- **TRN**: a station that has been synchronized with the Meridian 1 system. The MAT software has determined that the version of this station in the MAT PC database is consistent with the version of this station on the Meridian 1 system.
- **CHG**, or **RPL**: a station that has been changed (or marked for replacement) on the Meridian 1 system. The MAT system has determined that the station has been updated on the MAT PC database and that the version on the Meridian 1 system does not yet reflect the MAT update activity.
- **OUT**: a station that has been marked for deletion on the MAT PC database. It will not be deleted from the MAT PC database until the station has been OUTed (deleted) on the Meridian 1 system during a Synchronization/Transmit operation. A MAT user may update a station marked **OUT**. The MAT system will ask whether the station is to be restored before allowing you to update the station.

The MAT **Delete** or **Cut** operation works slightly differently depending on the station's synchronization status. A station marked **NEW** can be deleted immediately from the MAT PC database, since it has not been configured on the Meridian 1 system. A station with any other status is marked **OUT**, since the station must be OUTed on the Meridian 1 system before the station may actually be deleted from the MAT PC database. A station marked **OUT** will continue to appear in the list of stations until it has been successfully OUTed from the Meridian 1 system. A station with a status of **OUT** on the MAT PC database on which you apply **Edit - Cut** or **Edit - Delete** will continue to be marked **OUT** until it has been successfully synchronized.

Synchronization Considerations

If the Station Administration module is in Maintenance mode (set from **Options - Mode** in Station Administration module), you are prompted to schedule data transmission to Meridian 1 when any modifications are made to the data stored in MAT.

You can schedule synchronization when prompted, or schedule later.

Reports and Text Files

All log report activity is performed, by default, in the current working directory for the System (the system subdirectory in your PC system). Other reports are sent to the PC directory of your choice. Here is a list of text files with the appropriate extension found in the working directory:

- Report Forms (*filename*.FRM)
- Reports (*filename*.TXT)
- Validation Data (you provide the extension)
- Designation Strips (you provide the extension)
- Communications Logs (*filename*.LOG)

You need only supply the *filename* when prompted to save these files—MAT automatically supplies the appropriate extension.

Parsing Retrieved Data

Meridian 1 data retrieval is actually a two-stage task. MAT first retrieves the data to a file in the system subdirectory, then parses the file to conform with the MAT database rules.

The switch connection is only required during the retrieval stage. If you are connected to the switch through a modem, MAT will disconnect the modem immediately after the retrieval and before the parse. The parsing takes place on the PC only. If you interrupt the parse, for example by turning off or rebooting the PC, it can be restarted by using **Synchronization Retrieve - Parse Only**.

Multi-Tenant

If the TENA package is equipped, you must supply a tenant number (TEN).

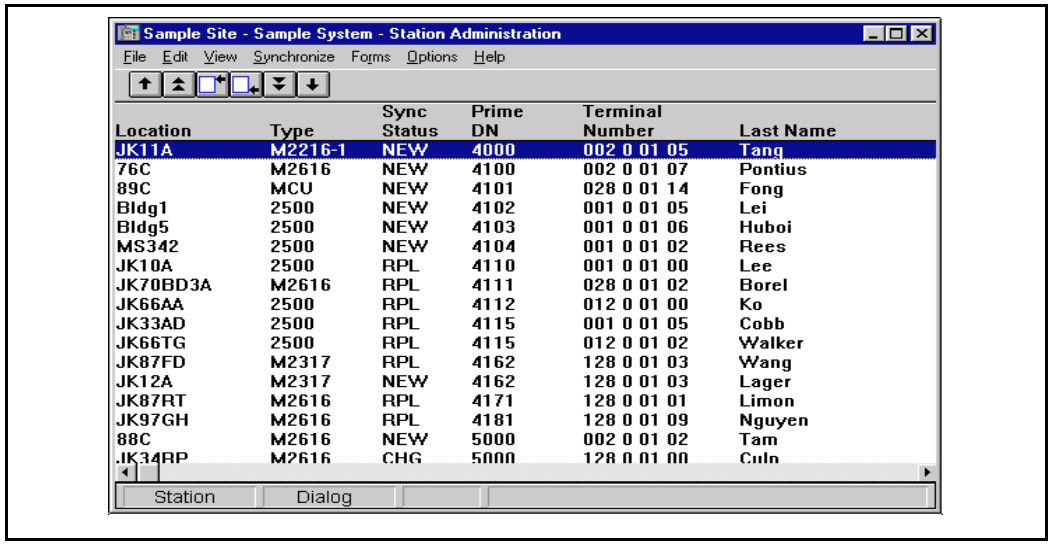
System Hardware

During station data retrieval, the system hardware information is updated with cards that will support the type of stations being retrieved. This might not actually match the hardware used (although it will be compatible). If an exact match is required, you must manually update the hardware data in the Station Hardware view.

Station Administration window

When you start Station Administration, the MAT Station Administration window opens, allowing access to station data for a single Meridian 1 system. Here is the MAT Station Administration window as first displayed:

Figure 2
Station Administration window



The MAT security system allows the system administrator to make functions available on a user-by-user basis. Those menu items that are not available to you are shown dimmed. The menu bar contains the following drop-down menus:

- **F**ile
- **E**dit
- **V**iew
- **S**ynchronize
- **F**orms
- **O**ptions
- **H**elp

File Menu

Use the **File** menu to access the station data of a selected system.

Reports: Lets you design and generate reports based on existing station data. This item includes the Report Generator and two existing reports, as follows:

- Bridges: a list of bridges on the system
- Multiple appearances: a list of multiple-appearance stations

Desig. Strip: Sends data for labeling buttons and keys on an instrument to a MAT viewer where you can browse and print the data.

Print: Sends the station list to a MAT viewer (described in "Generating Reports" on page 181) where you can browse and print the data. Choose from the following display formats:

- **Short Format**: one-page abbreviated list of station data
- **By Feature Group**: station data by Feature Group
- **By Field Mnemonic**: station data by Meridian 1 field mnemonic

Validate: Validates field values (all or partial, selectable in a submenu) for selected station records:

- **Partial**: checks station records that, if incorrect, can cause a transmission failure during synchronization
- **Full**: checks all station records

Conversion Utility: Launches the conversion utility, used to update MAT data. For more information, see the Conversion Utility chapter.

Close: Closes Station Administration and returns to the Meridian Administration Tools window. MAT automatically saves station updates as they are made. This means that you need not close an open system before quitting the application.

Edit Menu

Use the **Edit** menu to change data within an open system. Refer to the *Common Services User Guide* for details on **Undo** and **Cut / Copy / Paste**. The MAT-specific actions include:

Add / Delete / Update: Adds/removes/modifies stations for the currently open system.

Global Update / Select / Select All: Allows you to modify selected fields in a group of selected stations.

User Field Names: Assigns names for the 10 user-defined fields for the current system.

View Menu

Use the **View** menu to choose the station data parameters you wish to view. The currently selected view is indicated by a check-mark against the menu selection and is displayed in the status bar of the main window.

Station: This option displays a list of all stations defined for this system. When you choose an Edit function, the highlighted station record is opened. If none are defined, you can only choose **Edit - Add**.

Template: This option accesses templates that contain station definitions that the open system may use frequently.

Hardware: This option displays line cards used in the system. The Reserve TN feature adds new fields in this view to reserve units on the supported card types.

Sort: This option only appears when the Station view is selected. The list can be sorted by a criterion selected from a submenu that appears when you choose this item. The criteria include:

- Name
- Directory Number
- Location
- Terminal Number
- Instrument (telephone) Type
- Sync Status

Note: Sorting only affects the displayed list. It does not change the actual order of the station records within the database.

Synchronize Menu

Use the **Synchronize** menu to schedule communications with the Meridian 1 system. The Synchronize menu lets you set up reception or transmission of station data using the MAT communications functions. See "Communicating with Meridian 1" on page 157.

Retrieve: Allows selection of station data for retrieval from the Meridian 1 system into the station database. You can define criteria to select stations for download from the Meridian 1 system. Retrieve also allows a Parse Only option that formats retrieved data for MAT.

Transmit: Allows selection of station data for transmission to Meridian 1.

Reconcile: Compares discrepancies between station data and the MAT database and deletes invalid set information from the MAT database. Information about deleted sets is recorded in a log file. See "Communications Logs" on page 171.

Note: Before using **Reconcile**, be sure to **Retrieve** the latest station data first. This ensures the station data is compared to the latest MAT database.

Forms Menu

Use the **Forms** menu to configure form-based station administration.

Forms Interface: Enable or disable form-based station administration.

Select Form: Select which form to be used by form-based station administration.

Edit Custom Form: Run the station form editor.

Options Menu

Use the **Options** menu to configure options which affect the operation of the Station Administration and CPND Administration modules.

Mode: Invoke the mode function to configure the operational mode and optional station data validations.

Help Menu

Use the **Help** menu to display documentation to help you understand and use the application.

Contents: Displays the Contents page of the on-line documentation system.

Search Help On: Allows you to type in key words and select a topic of interest from the list of Help topics.

How to Use Help: Provides basic instructions about using the on-line documentation system.

About MAT: Displays copyright and version information about the current release of the MAT Station Administration application.

Accessing Station Data

Choose **View - Station** to display the list of stations defined for the system. Each line in the list contains the following information for one station. Refer to “Managing Station Data” on page 46 for a more complete description of these fields.

Location: A unique station identifier. MAT uses the value here as an index to the station.

Type: The instrument defined for the station.

Sync Status: An indication of whether Meridian 1 data and the data in MAT are synchronized. The following list defines the synchronization status for station data:

- **NEW**: A station defined in MAT that has never been uploaded to the Meridian 1.
- **TRN**: The station is synchronized with the Meridian 1.
- **CHG**: The station has been modified in MAT but not in Meridian 1.
- **RPL**: A station defined in MAT to replace synchronized station data.
- **OUT**: A synchronized station deleted from MAT but not yet from the Meridian 1.

Prime DN: The prime directory number.

Terminal Number: The station terminal number, representing the address within the Meridian 1 system (Loop # - Shelf # - Card # - Unit#).

Last/First Name: The station user's name.

Department: The department in which the station is used.

This represents part of the data record for a station so that you can identify that station in the listing. The rest of the station data is available as described in “Managing Station Data” on page 46.

The Template View

Choose **View - Template** to display a list of station templates defined for the system. The list contains the same information for a template as the Station view contains for a station. The value of the Location field in the list is the actual name of the template as displayed in the template list field of the Add Station dialog.

The Hardware View

Choose **View - Hardware** to display a list of line cards, for station TN assignment. If Hardware Validation is active, then the TN added to each set will be validated against the TN card type. The cards defined under the hardware view are also used for automatic TN assignment.

The Reserve TN dialog is accessed through the Hardware Configuration dialog box. Click on the Reserve Units button.

New Stations

You can add new stations to the list in the Station Administration view. Use a template that defines data for the station or stations that you are adding, or add each station individually. You must give each new station a unique Location field value.

If MAT is in Maintenance mode, you are prompted to schedule communication with Meridian 1 whenever you add new stations in MAT. You can synchronize the system data now, schedule a time for synchronization, or cancel the prompt and schedule synchronization later. See “Communicating with Meridian 1” on page 157.

Station Template

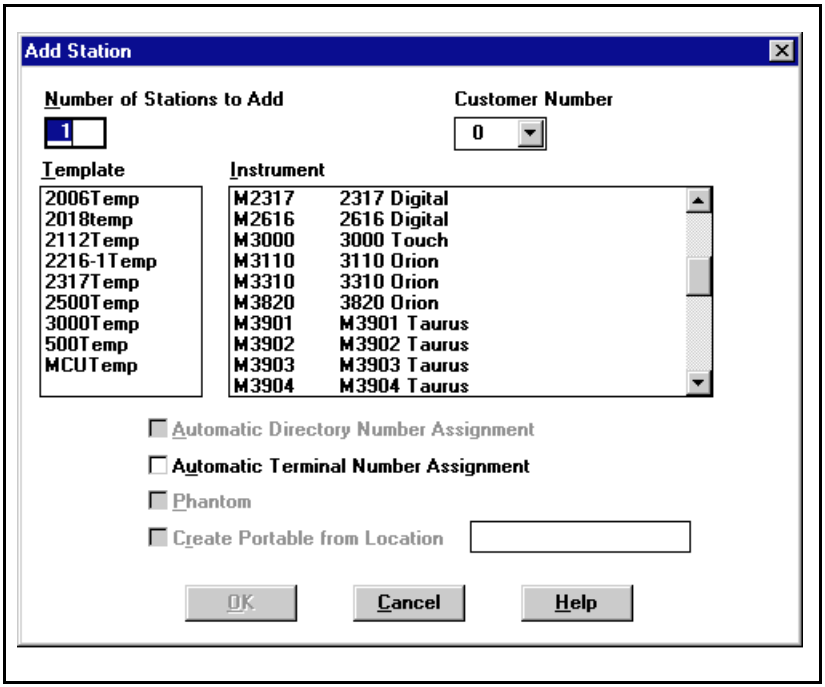
Data that is common to many stations can be stored in a template. In a single operation, using a template, you can define multiple stations which have data in common. The only data that must be added to stations defined with a template is the Location field value, so that each station added using the template can be identified in the list and by the Station Administration module. A template can contain all or part of a station definition and stations defined using templates can be changed in the same way as stations defined individually. You can change template data in exactly the same way as station data.

Add Stations

To add new stations, choose **Edit - Add** from the Station Administration window Station view. The Add Station dialog appears.

> ***Note:*** The Instrument field and the Template field are mutually exclusive. An instrument would be defined in the template. If an instrument is selected, there can be no selected template.

Figure 3
Add Station dialog



At any time, you can click **Cancel** to return to the Station list window without adding stations.

When the data for this dialog is complete, click **OK** to display one of the two dialogs below.

Adding a Single Station

If you are adding a single station, the dialog for the selected set is displayed. You can update the station data now or just give it a unique identifier in the Location field and click **OK** to accept the current data and update later if required (see “Managing Station Data” on page 46).

Adding a Phantom Station

To add a phantom station, a phantom loop must be defined first. Phantom stations can only be added to existing phantom loops. Use Overlay 17 to create a phantom loop. Retrieving station data from a system with existing phantom stations preserves the phantom loops defined for those phantom stations. Phantom loops can only contain phantom stations.

Choose **View-Hardware** from the Station Administration window Station view. The Hardware view appears. Choose **Edit-Add**. The Hardware Configuration view appears. Select the phantom card from the drop down list. If you do not enter values, MAT enters the next available loop-shelf-card information not used by the selected card into the appropriate fields. Click **OK** to return to the Hardware Configuration view.

Note: Cards must have unique loop-shelf-card combinations.

Choose **View-Station** to return to the Station view. Choose **Edit-Add**. The Add Station dialog box appears. In the Instrument field, select an analog type set. For example, the 500 set. Click on the Phantom check box. Click **OK**. The Station Data dialog box appears.

Note: Phantom TNs can only be assigned to analog sets.

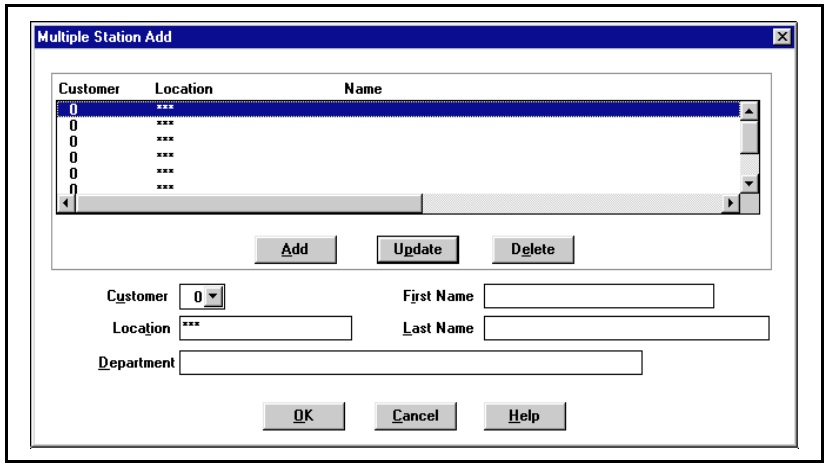
Enter the terminal number for the station in the Terminal Number field. Each station must have a unique TN. Double-clicking in Terminal Number field displays the Terminal Numbers window listing available terminal numbers associated with this loop. If no phantom cards are defined, this window is blank. Double-click on an available terminal number on the list to enter that value into the Terminal Number field in the Station Data dialog box.

Adding Multiple Stations

If you are adding more than one station, the Multiple Station Add dialog is displayed. This dialog lets you define some aspects of each station to be added. If you used a template for station definition, much of the station data may already be defined.

The dialog contains an updatable list box containing the stations. The following data fields allow you to define or update the stations in the list.

Figure 4
Multiple Station Add dialog



Adding the Stations

When you have defined the station or stations that you wish to add, click **OK** in the dialog. If the Location field for one or more of the stations is not unique, an error box appears. Click **OK** in the error box to return to the previous dialog to make the correction.

MAT adds the accepted station or stations to the MAT station database. If MAT is in maintenance mode you are prompted, in a Synchronization dialog, to set up communication with the Meridian 1 system. See “Communicating with Meridian 1” on page 157.

Click **Cancel** in the Synchronization dialog to return to the Station Administration list. The new stations are added with a status of **NEW**. In this case, you can use the Synchronize menu at a more convenient time to set up communications.

Deleting Stations

You can select stations for deletion from the Station list view. Use one of the following methods to remove them from the MAT database:

- Press the **Delete** key
- Choose **Edit - Delete**
- Choose **Edit - Cut**

Each method displays a **Yes/ No** confirmation prompt before removing the stations. If you click **Yes**, MAT removes the stations from the MAT station database.

There are special considerations to bear in mind when deleting stations that contain references to Voice Mailbox directory numbers. Refer to "Voice Mailbox" on page 137 for more information.

If the stations to be deleted have never been synchronized with Meridian 1 (Sync status is **NEW**) they are removed from the list in the window. In this case you can bring the stations back by choosing **Edit - Undo Delete**. This undelete is only available until you perform another edit function on the station list.

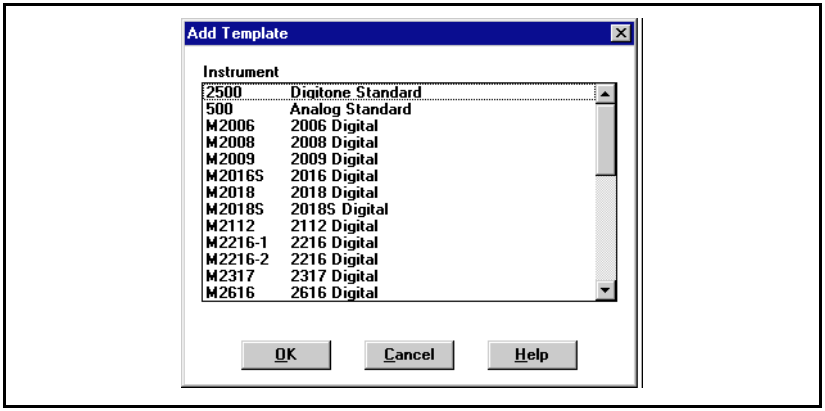
If the Sync status is not **NEW**, deleted stations are marked for deletion from Meridian 1 at sync time by setting the sync status to **OUT**. These stations will not be deleted from the list until synchronization. If you attempt to change such stations, you are prompted to bring them back before the update can be performed. If you do bring them back, the status is reset to the original sync status. Attempts to delete stations with sync status **OUT** are ignored.

Adding a Station Template

You can use a template of station data to add multiple stations (or a single station) with common data. To create a template, choose **Edit - Add** in the Station Administration list view window with the **View - Template** option selected. This displays an Add Template dialog containing a list of instruments (telephone types) that you can use with this particular system.

Select an instrument you wish to use for this template and click **OK** to display the dialog for the instrument. You can change the data in this template as if it were a regular station (see "Managing Station Data" on page 46).

Figure 5
Add Template dialog



You are still required to insert a unique identifier in the Location field before the template is accepted. The data entered is used by MAT as the template name (displayed in the Add Station dialog).

If you wish to modify an existing template, proceed as if it were a single station. Choose **Edit - Update** in the Station Administration window with **View - Template** selected.

Managing Station Data

MAT displays individual station data in a dialog that graphically represents the set used at that station. If the telephone has feature keys, these are displayed and can be selected like all other fields. Some data entry fields (those that use DN or TN data, for example) can be double-clicked to display options for that field.

Data change is described for a typical set (M2616). Most other instruments contain a subset of the data for this instrument, and the update procedure for each field and function is the same as that described here.

Whenever you modify station data that has already been synchronized with the switch, the Sync Status for that station is set to **CHG**. This is an indication that MAT and Meridian 1 are not in sync.

If MAT is in maintenance mode, you are prompted to set up communication with the Meridian 1 system. You can synchronize the data at this time, schedule a time for synchronization or cancel the prompt and schedule synchronization later. See “Communicating with Meridian 1” on page 157.

Updating Stations

MAT displays a list of stations for the selected system in the Station Administration module when you choose **View - Station**. You can update the data for any station by selecting the desired station and choosing **Edit - Update**. This displays the dialog for the set that the station currently uses. You can update multiple stations at one time. See “Global Update” on page 143.

Station Data

The dialog shown above is for an “M” series digital set. Typically, the dialog associated with a particular set will contain a subset of the data fields and functions listed here for the M3904 set.

In addition to the normal **OK**, **Cancel** and **Help** buttons, the set dialog can have other function buttons such as **Features** and **Admin**. These functions are described in “Features Button” on page 58 and “Administration” on page 62, respectively.

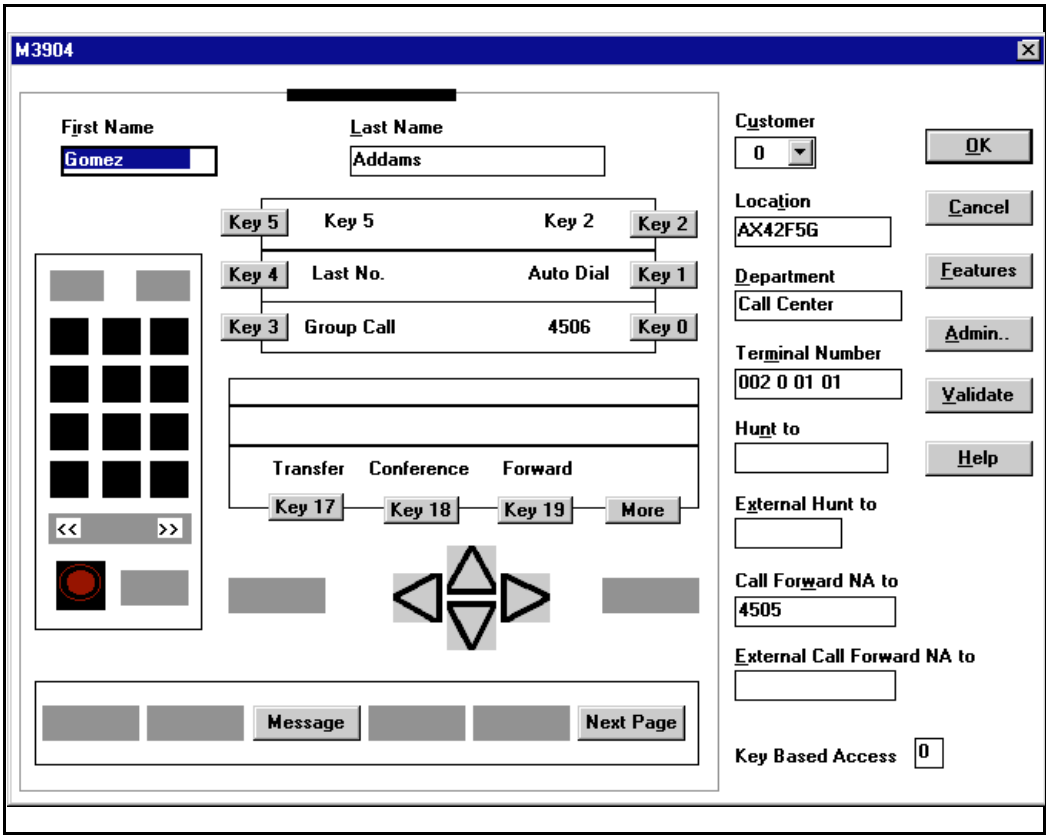
Functions and options assignment is described in “Key Assignments” on page 50. An additional Key Features Edit field is displayed for analog sets to allow you to assign key functions. This field is described in “Key Features” on page 60.

The data fields for an instrument are a subset of the following:

First Name / Last Name

The First Name can contain up to 15 characters (the display shows 8 but you can scroll horizontally to see up to 15) that could be the last name of the person associated with this station. The Last Name can contain up to 20 characters (12 only are displayed). This data is used for administrative purposes only and is not stored in Meridian 1. Note that the CPND function can access this as the displayed name for the DN assigned to this station.

Figure 6
Station Data dialog



Customer
You can select one of a drop down list that contains the customers associated with the site.

Location (Required)
The Location is a unique identifying code for this station, up to 12 characters. MAT does not let you assign a code that is already in use for this site.

Note that, if you have not defined DES (MAT data only), then MAT assigns the first six alphanumeric characters of the Location field when you synchronize MAT data with Meridian 1.

Note also that, on receiving data that is not defined in MAT from Meridian 1, the Location field is assigned the full TN value, including hyphen separators, of the station.

Department
You can use the Department field to define the department where this station is used. The field displays 14 characters but you can scroll horizontally to show up to 31 characters.

Terminal Number
This field contains up to four separate numeric fields that represent the Meridian 1 address (the full terminal number contains values for Loop, Shelf, Card and Unit) that this station uses.

Hunt to / External Hunt to
You can enter a DN in these fields that will receive calls if this station is busy. Note that you can use any telephone number, even one that is external to this site. However, you can double-click this field to display the DN list defined in the Customer's Number Plan for this site and choose one of those. The External Hunt is for incoming calls that are not from a DN in the Numbering Plan.

Call Forward to / External Call Forward to
You can enter a DN in these fields that will receive calls if there is no answer at this station after a pre-determined number of rings. These fields operate in the same way as the Hunt to and External Hunt to fields (see DN Assignment)

In addition to these fields, a station may have feature/option keys or key lamps. Some sets can have additional keys as add-on modules. In such cases, one of the following fields is available in the dialog:

Key Based Access/Add on Modules
This field allows you to program key features for add-on key modules. You can enter a number in the range 0-2, which indicates the number of add-on modules attached to the set. Additional function buttons (for example, Add On 1) may appear on the dialog, based on the entry in this field.

You can click these additional buttons to display a dialog that graphically represents the keys of the add on module. You assign features to the add-on modules the same way that you assign features to keys on the set.

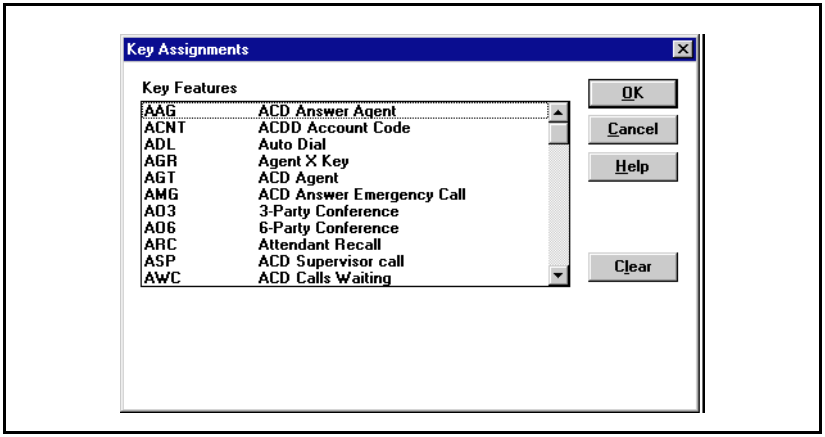
For sets that do not have keys or key lamps, the available features assignment dialog is displayed within the set dialog itself.

For sets that do not have keys or key lamps, the available features are displayed within the set dialog itself. The assignment procedure is as described in “Key Assignments” on page 50.

Key Assignments

In addition to the data fields, the set may have keys to which you can attach feature functions. When you select a key, a Key Assignments dialog containing a single-selection scrollable list of Key Features is displayed. The features listed are defined for this set using the Features button on the station data dialog.

Figure 7
Key Assignments dialog



In addition to the usual **OK**, **Cancel** and **Help** buttons, the dialog has a **Clear** button that you can use to remove any feature attached to the selected key on the set (to assign a different feature, it is not necessary to first clear the current feature). You may also enter the first letter of the Key Feature of interest to move to that section in the list.

The dialog contains a single-selection Key Features list. The currently selected feature is highlighted. Select using the mouse or the up/down arrow keys.

Click **Cancel** at any time to return to the station data dialog without changing the current key assignment. Click **OK** to assign the selected feature to the key.

Some of the features require you to enter additional information. When you select one of these, text entry boxes are displayed in the dialog. You can double-click on a DN text entry box to display the list of DNs in the customer's Numbering Plan that are available to the selected feature (see "Directory Number Assignment" on page 51).

Directory Number Assignment

There are three kinds of DNs:

1 A DN assigned to the station. This must be in the customer's Numbering Plan as defined for the system.

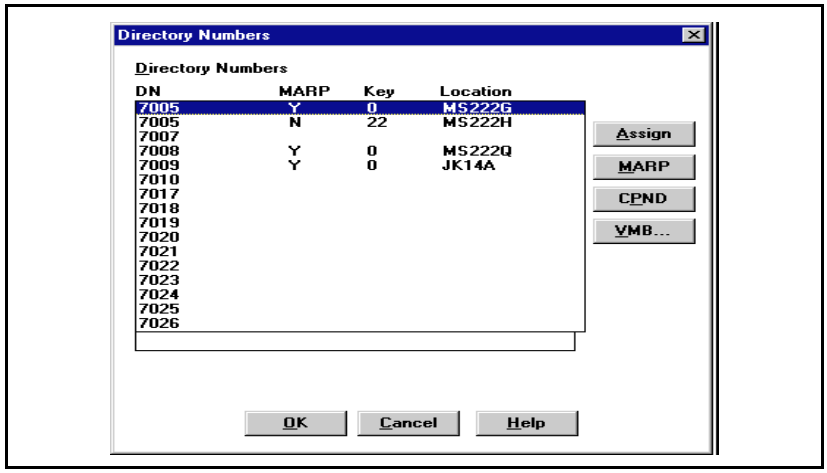
2 A DN referred to by this station (message center, for example) that must be in this customer's Numbering Plan.

3 A DN referred to by this station (Call Forward, for example) that can be the number for any station—external or within the Numbering Plan.

To enter a DN for a selected station, you can type the number into the Directory Number field or double-click within the Directory Number field to select from a list of DNs used in the Numbering Plan for the customer.

A manually entered number for DN categories 1 and 2 above will not be accepted if it is not contained in the Numbering Plan, unless the Numbering Plan validation has been turned off (**Option - Mode**).

Figure 8
Directory Numbers dialog



If you are assigning a DN to this station (versus referring to the DN of another station as in forwarding or hunting options) the dialog allows functions in addition to the usual **Cancel**, **Help** and **OK** buttons:

- **Assign**: assigns the highlighted DN to the key.
- **MARP**: If the assigned DN is being used by another station you can assign incoming calls to that DN to this station with the Multiple Appearance Redirection Prime (MARP) button. To assign incoming calls to the other station, you must update the other station and select the MARP function here. This button toggles the current MARP assignment.
- **CPND**: A Call Party Name Display (CPND) display dialog allows you to define how calls from this station are displayed to the receiving station. See “CPND Data Considerations” on page 67.
- **VMB**: A Voice Mailbox (VMB) display dialog allows data associated with a DN (which serves as a mailbox ID) rather than a TN. You can modify the VMB data from any station which has an appearance of the mailbox DN. Refer to “Voice Mailbox” on page 137.

The dialog contains a single-selection list of DNs defined in the numbering plan for this system. Those numbers that are already assigned also have MARP and Location data listed. The currently selected DN is highlighted. If you are assigning a DN to this station, the dialog also contains a display-only box with the current DN assignment entered.

At any time, click **Cancel** to return to the previous window without changing the current assignment. Click **OK** to assign the DN and return to the previous window.

Terminal Number Assignment

The Terminal Number (TN) is the full hardware address of the port to which this station is attached. If the Terminal Number field requires an entry, you can type the number into the Terminal Number field or you can double click within the field and select from a list of available TNs. The data entry must be in the format:

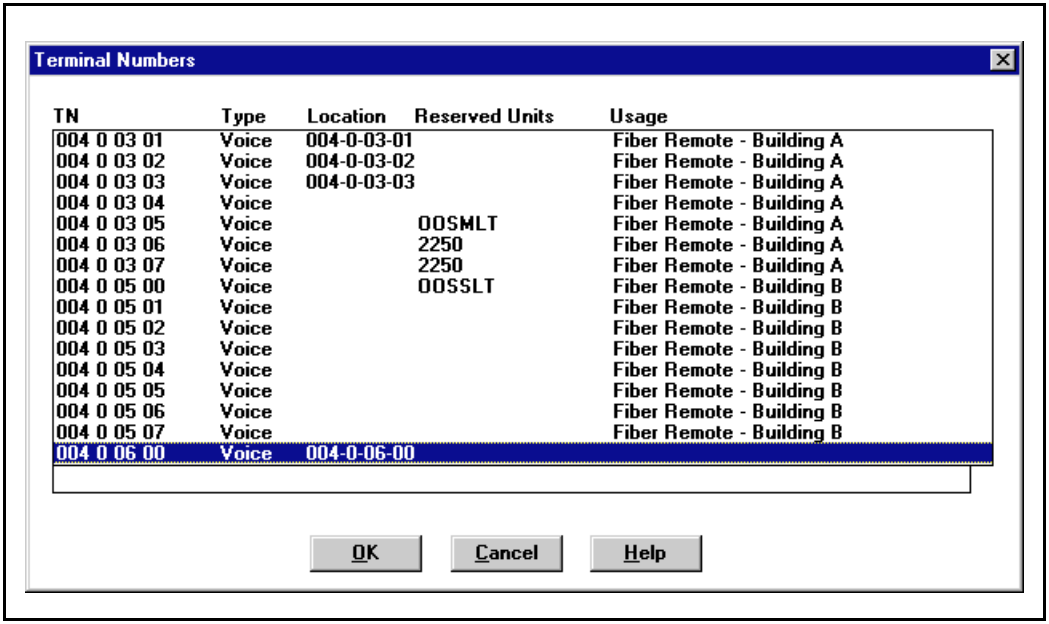
lll s cc nn

Where:
lll = The number of the Meridian 1 loop.
s = The number of the system shelf.
cc = The number of the shelf card position.
nn = The number of the card circuit (port).

The range of numbers available depends on the hardware configuration and software release in use at the system.

The list shows the Location for all TNs that are already assigned. See Figure 9.

Figure 9
Terminal Numbers window



The dialog contains a single-selection list of TNs defined in the Station Hardware view that permit access to the set defined for this station. The current selection is highlighted.

At any time, click **Cancel** to return to the previous window (Set dialog) without changing the current assignment. Select a TN and click **OK** to assign the TN and return to the set dialog. The MAT system validates the TN for availability and permissibility using the Hardware assignments stored under the Station Hardware view, and assigns the TN.

> ***Note:*** Automatic TN Assignment will not assign any units in the Hardware View that are marked as a RUT. See "Reserve TN Feature" on page 56.

Reserve TN Feature

This feature allows users to assign TNs to support instrument types on a station line card and mark these units as reserved for a given unit type. These types, referred to as Reserve Unit Type (RUT) include:

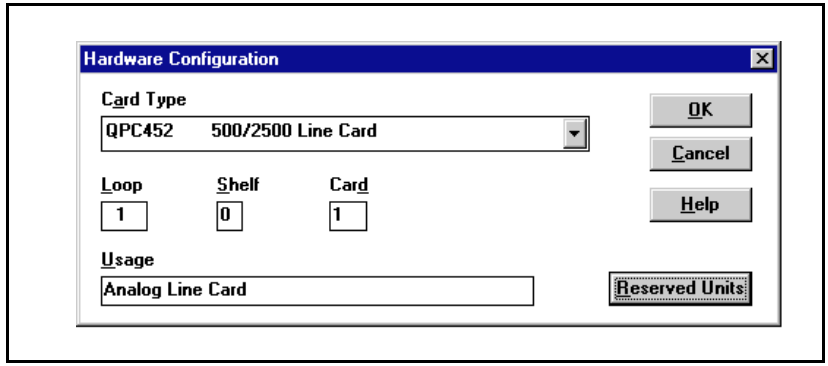
- ATT (Attendant Console)
- 1250 (1250 Digital Attendant Console)
- 2250 (2250 Digital Attendant Console)
- R232 (RS232C Units)
- R422 (RS422 Units)
- OOSSLT (Out of Service Single Line Terminal)
- OOSMLT (Out of Service Multiple Line Terminal)
- PWR (Power for Attendant Console)
- OTHER (as defined by the user)

When a unit is reserved as one of these types, it will not be assigned during Automatic TN Assignment and will appear in the TN Selection List Box accordingly. The Automatic TN Assignment will not assign any units in the Hardware View that are marked as a RUT. RUTs are validated at the field and global levels. RUTs are marked by the user in the Hardware View and by the Station Retrieval Module. The Reserve TN feature shows existing Usage Fields at the card level in the Hardware view.

> ***Note:*** Reserved Units TNs are skipped during Automatic Terminal Assignment.

Access the Reserve Units dialog box through the Reserve Units button in the Hardware Configuration dialog box. See Figure 10.

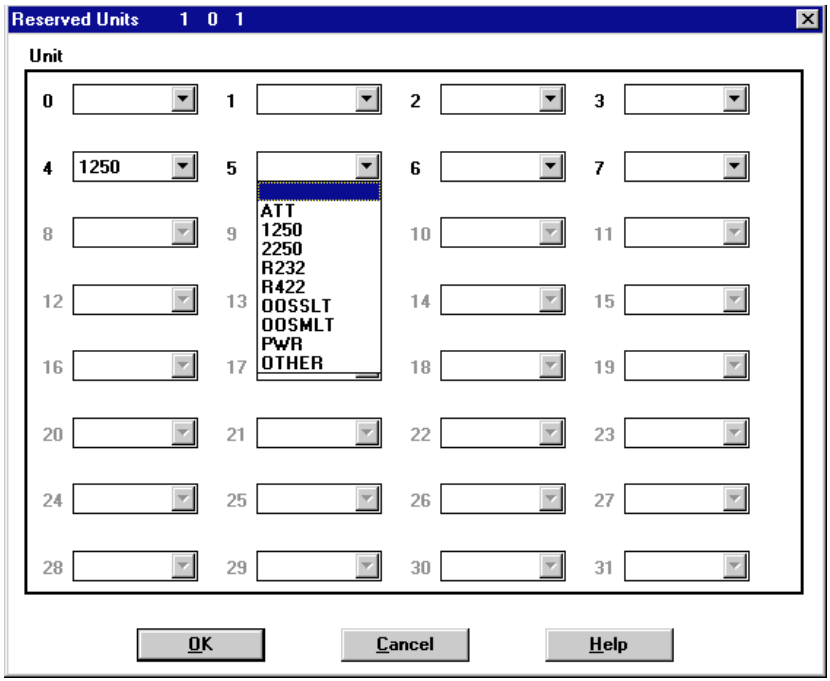
Figure 10
The Reserved Units button in the Hardware Configuration window



The Station Retrieval Module recognizes RUTs and updates the Reserved Units fields in the Hardware View with the RUT value during an initial retrieval. Discrepancies are handled in the same way as other retrieved fields with the Meridian 1 value overwriting the MAT database value. RUTs are not displayed in the Retrieval Specify by Type field since they are not treated as Station Types.

Use the Reserve Units dialog box to assign RUTs. See Figure 11.

Figure 11
Assigning values in the Reserved Units dialog box

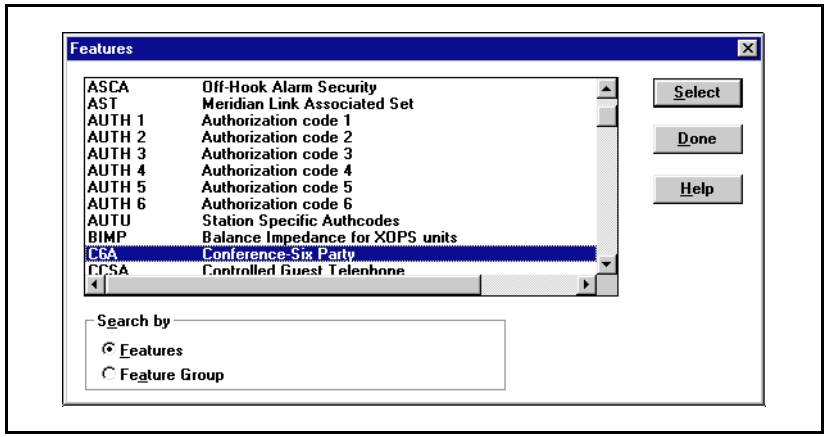


Features Button

The **Features** button on the station data dialog lets you examine and update station features and options defined for your system. This is the function you use to assign a value to the DES field in MAT. It allows you to set feature key assignments. The **Features** button displays a list box containing a single-selection scrollable list of features or feature groups. See Figure 12.

Select the appropriate radio button to sort by either Features or Feature Groups. “Features” sorts the features alphabetically by Meridian 1 mnemonic. “Feature Groups” organizes the features into related categories.

Figure 12
Features dialog



The dialog contains **Select**, **Done** and **Help** function buttons. **Help** displays on-line help for this dialog. **Done** returns to the station data dialog and **Select** displays a dialog associated with the selected feature that lets you define appropriate parameters for that feature, and perhaps assign the feature to a key.

Use one of the following methods to select a feature:

- Select a single feature with a mouse click.
- Use the arrow keys to move the highlight bar to the desired feature.
- Type the first letters of the feature mnemonic (for example, SCR).
- Click and drag the highlight bar to the desired feature.

Use the Page Up and Page Down keys to browse the feature list.

When you click **Select**, MAT displays a dialog for the selected feature. You can enter data in the dialog. When you click **OK**, MAT modifies the feature based on your input, and returns to the Features list.

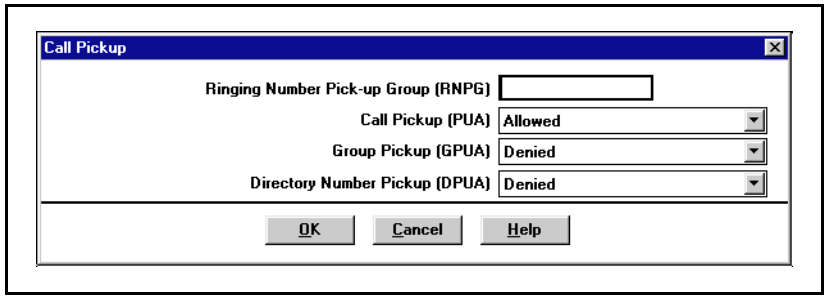
While the Features list is open, you can examine and modify other features. When you finish modifying features, click **Done** to return to the Station Data dialog. The keys that you assigned are labeled appropriately.

When you are finished defining or examining features, choose **Done** to return to the station data dialog. If you have assigned keys, the appropriate keys are labeled in the station data dialog.

Feature Group category

When you select **Search by Feature Group** and choose **Select** in the Features dialog, a dialog that defines the selected feature appears. The dialog shown in Figure 13 is for the Call Pickup feature. The other dialogs are similar in appearance.

Figure 13
Feature dialog (example)



The dialog contains fields (usually text boxes associated with drop-down selection lists) that define the functionality of the feature. If the feature can be assigned to a key, the dialog also contains a Key Features list of functions that can be assigned to a key for this feature.

Forced targets

Some entries in the Feature dialog box will force a change in the class of service (CLS) of the selected station. For example, filling in the “Flexible Call Forward No Answer DN (FDN)” field of call redirection forces “Call Forward No Answer (FNA) to “Allowed”. This target enforcement occurs only as the feature dialog is exited. There may be a noticeable flickering of the screen as the values are forced and the dialog exits.

Key Features

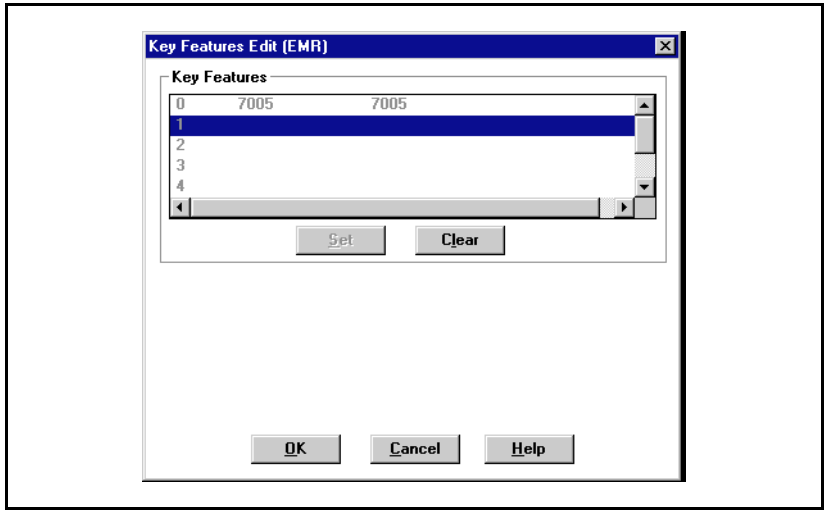
The Key Features field is a single-selection list of features associated with this feature group. You can assign the function selected in this list to a key for the selected station.

You assign features to a key from the Key Assignments dialog. Double click the desired function in the Key Features list of the Features dialog to display the Key Features Edit dialog for the selected function.

> ***Note:*** You can only make key assignments to sets with feature keys. Key assignments cannot be made to Type 500 or 2500 stations.

The dialog shows a single-selection list of key numbers. Each key in the list shows any already-assigned feature (and associated DN if applicable). The list is dimmed except for any assignment made during this session.

Figure 14
Key Features Edit dialog



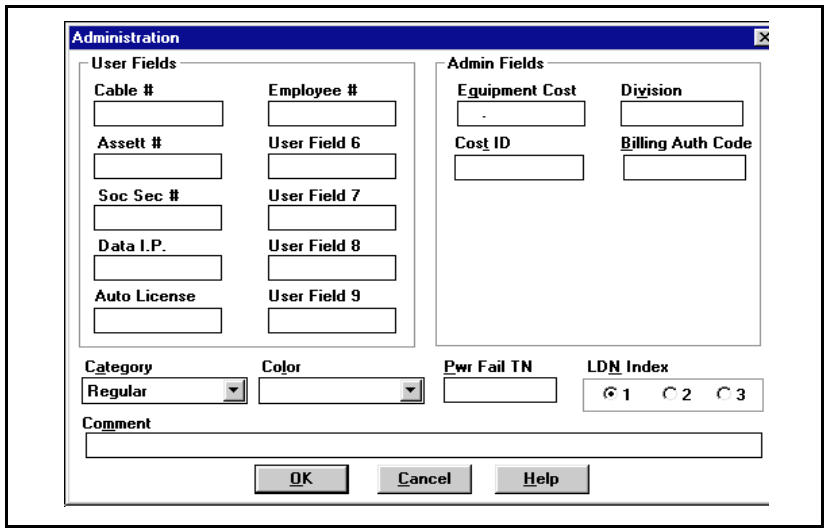
The list field is associated with two function keys, **Set** and **Clear**. If the selected key is already assigned, the **Set** function is dimmed. Use the **Clear** function to remove a key assignment. Use the **Set** function to assign the current feature to an unassigned key.

At any time, click **Cancel** to return to the Features definition dialog without changing the current key assignments. Click **OK** to assign key function and return to the Features Definition dialog.

Administration

Choose **Admin** in the station data dialog to display the Administration dialog. The Administration dialog allows you to assign values to fields that MAT uses in classifying and administering station data. These fields are not part of the Meridian 1 data block. The user fields and their labels are assigned using **Edit - User Field Names**. These headings allow you to define values for your own situation. This option contains text boxes so that you can assign specific values to these fields for this station.

Figure 15
Administration dialog



The data entry fields in this dialog include:

Category: A drop-down list of line connection types for this station

Color: A drop-down list of colors available for this instrument.

Pwr Fail TN: A text box for the TN used if the system power fails.

LDN Index: Radio buttons to define which of three indexes contains the DN for this station. A DN index is set up at the system level when the Numbering Plan is defined. The index is used while viewing and printing designation strips for this instrument.

Admin Fields: The Admin fields are used by the Call Accounting Billing Database for billing purposes and other types of cost allocation. Refer to the *MAT Call Accounting User Guide* Database menu section for details.

Designation Strips

A telephone can have many features and services available by function buttons (keys) and indicators. A Designation Strip is a printout of labels that can be attached to the telephone to indicate the function of the various buttons and indicators on the set (and also the DN of the station using the set). You can create files that let you examine and print Designation Strips created from the data defining the stations using **File - Desig. Strip**.

A Designation Strip will typically contain the directory number for a single line set. In addition, sets with key caps that designate a DN (for multi-line sets) or reference other DNs also appear in the Strip.

Designating Directory Numbers

A Meridian 1 system can have up to three listed directory numbers (LDN). The system Numbering Plan defines whether ranges of directory numbers (DN) are set for direct inward dialed (DID) or not. Typically, a station DN, as defined for the Designation Strip, is a regular 10 digit telephone number with an extension:

(aaa) xxx-aaaa Ext *bbbb*

Where:

aaa	represents the area code
xxx	represents the exchange
aaaa	represents the number
bbbb	represents the extension

The Designation Strip utility examines the System Configuration Customer data to determine the LDN used by the station. The utility determines whether the station DN is in a DID range defined in the system Numbering Plan. The following are the two possible results:

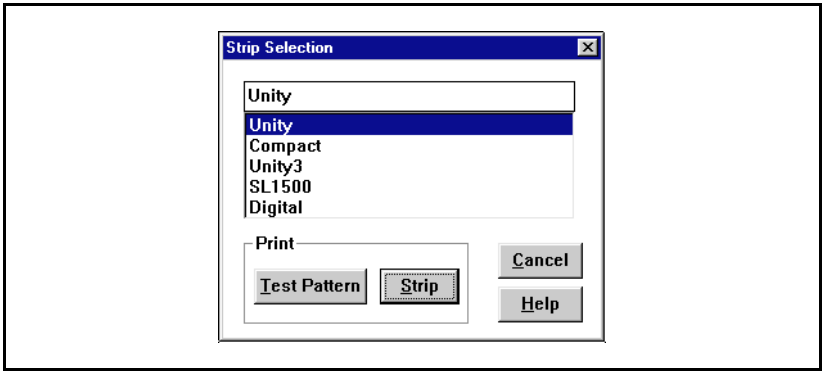
Non-DID number: The Strip prints the LDN and uses the station DN for the extension.

DID Number: The Strip gets the area code (aaa) from the LDN, the exchange (xxx) from the DID number, the number (aaaa) from the station DN.

Display of Designation Strips

Choose **File - Desig. Strips** from the Station list window to display the Strip Selection dialog. See Figure 16.

Figure 16
Strip Selection dialog



The dialog contains a single-selection scrollable list of Designation Strip types created by MAT. The current selection is highlighted. **Cancel** returns to the Station list window. **Help** displays on-line help for the dialog box. **Test Pattern** sends a single page dummy strip to the Viewer. Use this to print on the appropriate form and ensure that the form is aligned correctly in the printer. **Strip** sends Strips for stations selected in the Station Configuration view to the MAT Viewer. From the Viewer window, print the strip by selecting **File - Print** from the menu bar.

Designation Strips are printed on special forms. The following separate form layouts are used by MAT:

- Unity for Unity 1 and Unity 2 sets
- Unity 3 for Unity 3 sets
- Compact for older SL-1 type sets
- SL-1/500 for normal SL-1 type sets
- Digital for M2000 series digital sets (not M3000 series)

Note: All other sets would use the SL-1/500 Strip layout. Stations with ACD keys will have both the ACD DN and the Position ID printed. It would be up to the user to attach the desired label to the appropriate key.

Station Data Validation

The station database contains one record per station. Some of the field values in a record depend on the system properties, the instrument used, and features and options enabled. In addition, the MAT application contains "rules" that define possible values, sizes, and ranges for the fields.

The Station Administration module includes a Validation utility that checks that the values assigned to certain fields are compatible with the configuration and the MAT data rules.

The Validation function checks the currently selected station records in the Station list view before uploading to the Meridian 1. There are two options—partial and full validation. Full validation checks every field and might require considerable time.

Note: You can validate the data for each station individually using the Validate function key on the set dialog. This button examines the entries for the current open station only. Any errors are noted. Perform a Station Validation to capture any data entry issues that may result in a transmission error when synchronizing with the Meridian 1.

Validating the Data

Select the stations for validation in the Station list view and choose **File - Validate** to display a cascading submenu. Choose **Partial** (checks the values defined previously) or **Full** (checks all field values) to start the Validation check.

While MAT performs the checks, a status box indicates progress in single record increments. At any time, click **Cancel** in the status box to halt the task.

Note: Clicking **Cancel** discards the validations already completed.

When the task is complete, the MAT Viewer displays the validation data. You can save this to a text file (in a user-defined file name and location), print it, or simply browse and discard it (see "Generating Reports" on page 181 for a description of the Viewer).

When the task is complete, you should send all the new or modified station and CPND information to the Meridian 1 system. You may select all the **NEW** or **CHG** stations, for example. You should apply the Validation process from the **File** menu to the selected stations to ensure that the entered data is consistent across all stations. See "Communicating with Meridian 1" on page 157.

CPND

CPND Overview

Call Party Name Display (CPND) displays the name of the calling party of an incoming call to the called station user. The CPND data is associated with a DN, and not with any particular station. If CPND data is assigned to a DN, it may be associated with multiple stations.

The CPND Administration module is separate from the Station Administration module. CPND Administration lets you create, maintain, change, and report on single and multi-line CPND information. CPND Administration data defines the setup for each customer's CPND configuration and CPND Name data defines the display parameters for DNs used by a particular customer. Station configuration data and CPND data are separate within Meridian 1 and are treated as separate files within MAT.

CPND data for a station is accessible through the Station Administration module. The CPND button in the DN list of the Station module allows you to maintain CPND information directly from the DN list. This is particularly convenient if several DNs are to be linked back to the name for this station.

CPND is provided as a separate module to allow you to directly enter CPND data for DNs, Dial Intercom Groups, or DNIS IDC. The display of MAT CPND records shows the synchronization status and can be used to selectively synchronize this data with the Meridian 1 system.

CPND Data Considerations

You should be aware of the following considerations when using the CPND Administration function of Station Administration.

CPND Names vs. Station Names

The name defined for CPND need not necessarily be the same as that defined for a station end user on the face of the station graphic. The Station Configuration Name is only maintained in MAT and is not stored in the Meridian 1. The name stored by MAT is the CPND associated with a particular DN.

In most cases, the name on the station graphic is also the name associated with a DN of the station. MAT can automatically link the name on the graphic with one or more of the DNs on the station. To link the name on the graphic with a DN, fill in the location code of the set in the “get name from location” field on the Name dialog.

The Station Retrieve module automatically parses and updates the Merdian 1 CPND Name information. The module automatically sets the value for the “get name from location” field in the CPND Name dialog box to match changes in the Referenced Location values. Changes to the name on the station will not affect the station’s Sync Status but will update any CPND name entry to RPL.

If the name data is linked in this manner, the first and last names in the name dialog will be filled in and grayed. The data can only be changed from the station graphic. In order to remove the linkage, delete the location code from the “get name from location” field in the Name dialog.

The CPND Name information is accessed in either the Station module (from a CPND function button in the DN list dialog) or the CPND module. All CPND data is synchronized with the Meridian 1 system using Overlay 95 (and not with the CPND prompt in Overlays 10 or 11 as in recent versions, Release 19, of the Meridian 1 system).

CPND Synchronization

CPND and Station synchronization are separate functions. They are only connected if CPND data is defined from the Station DN list, or if the CPND name is taken from the Name field of the Station Administration module.

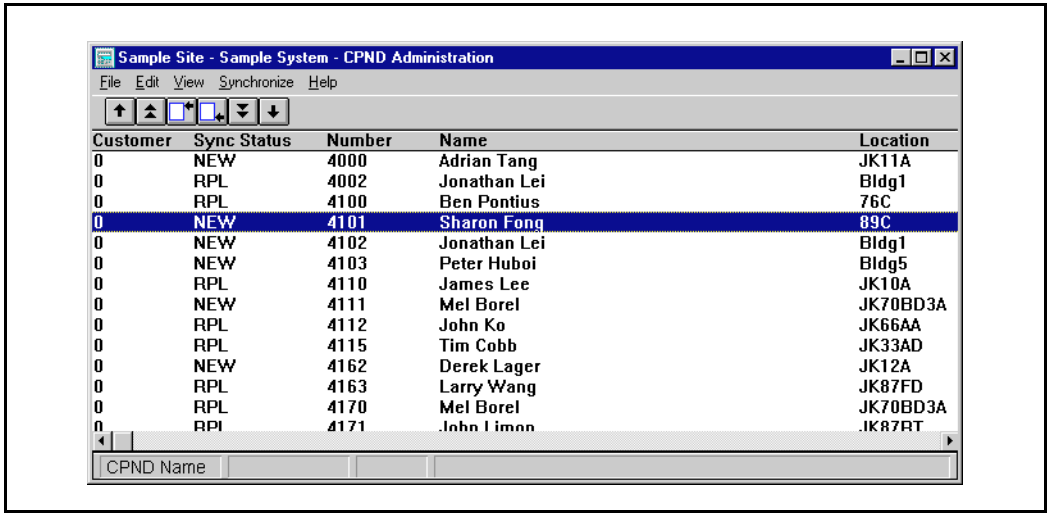
In some cases, MAT is aware of such a connection. If MAT is in Maintenance mode, the system automatically attempts to synchronize the new CPND information when the station is transmitted. In installation mode, you must synchronize CPND data separately from within the CPND module.

The CPND Module

The MAT CPND Administration module allows access to the CPND data for a single Meridian 1 system. When you open the CPND module, a list of name data contained within MAT is displayed. If the data has not yet been retrieved from the Meridian 1 or added to the MAT database, the window contains no data.

Figure 17 shows the MAT CPND Administration window as first displayed.

Figure 17
CPND Administration window



Accessing CPND Data

The MAT CPND Administration window allows you to configure CPND blocks. After CPND blocks are configured, you can configure Name data for DNs.

From the **View** menu, the following list views for CPND data are available:

- Customer Configuration list (CPND Administration).
- Name display list (CPND Name)

The CPND list view contains only a few items (just one in many cases). This view lists the CPND blocks configured on this system. The Name view might have many items, probably more than will fit in the current window. This is the scrollable list of names whose display parameters are defined for CPND.

CPND Administration View

With **View - CPND** selected, the CPND Administration window displays the list of CPND blocks configured for the system. The following information is displayed for each customer:

- Customer: The customer number as defined in the system configuration.
- Sync Status: The synchronization status of the station's data between the Meridian 1 and MAT. See CPND Name view for more detail.

The data in the window is part of the CPND Administration data stored in MAT. The complete configuration data for this system is available as described in the CPND Data Change section of this document.

CPND Name View

With **View - CPND Name** selected, the CPND Administration window shows a list of names defined in the system. The following headings define the data for each station displayed:

- Customer: The customer number that uses this DN.
- Sync Status: The synchronization status of the station's data between the Meridian 1 and MAT.
- Number: The DN using the CPND data.
- Name: The defined CPND name (not the name of a station user unless called for in the Location field).
- Location: The optional unique station Location Code for the CPND name source.

Sync Status: An indication of whether Meridian 1 data and the data in MAT are synchronized. The following list defines the status for CPND data:

- **NEW**: CPND data defined in MAT that has never been uploaded to the Meridian 1.
- **TRN**: The CPND data is synchronized with Meridian 1.
- **CHG**: Data has been changed in MAT but the change has not been sent to the Meridian 1.
- **RPL**: Data defined in MAT to replace synchronized name data.
- **OUT**: Synchronized CPND data deleted from MAT but not yet removed from the Meridian 1.

The data in the window is part of the name display data stored in MAT. The complete name data is available as described in CPND Data Change.

CPND records can be sorted and displayed a number of ways. In the CPND Administration window, select **View-Sort-...**. Records can be sorted by:

- Directory Name
- Last Name
- First Name
- Sync Status

Note: When upgrading from a previous release of MAT to MAT 6, any CPND name that is linked by location to a station will not sort by first name and last name since names linked to stations in this way are not stored in the CPND database. Perform a station retrieval to resolve this discrepancy.

Recommended Usage

You cannot build CPND Name data until the CPND data block is defined. First you must configure (or retrieve from Meridian 1) the CPND data block for the selected customer.

When the customer's CPND data block is defined, you can create (or retrieve from Meridian 1) the CPND Name display information.

CPND Data Change

You can change the data associated with the selected CPND view. The selected item in the list view is highlighted. Select an item using a mouse click or use the up/down arrow keys to highlight the desired item. You can also double-click the desired item.

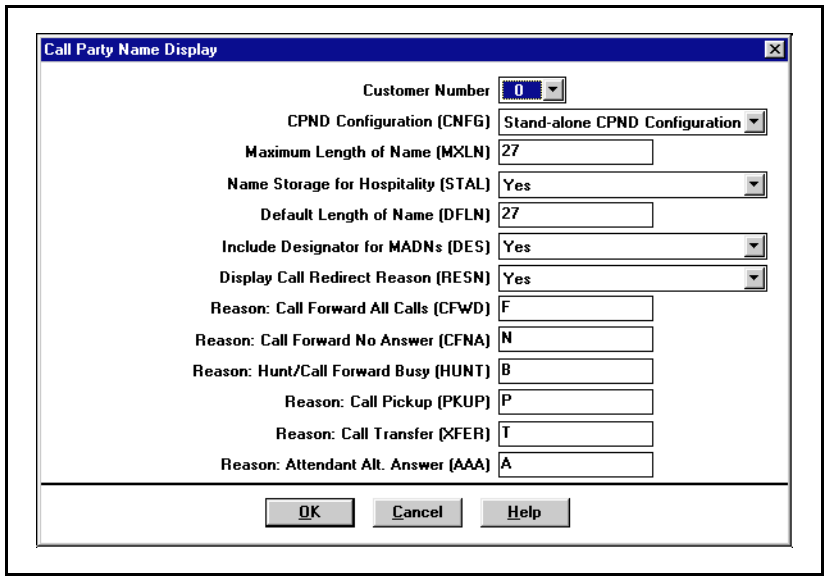
Choose **Edit - Delete** to remove the selected CPND list item. Choose **Edit - Update** or **Edit - Add** to display a dialog that allows you to update the data fields for the selected view.

Updating the Customer Configuration Data

With **View - CPND** selected, you can change the selected customer's CPND data. The selected CPND block is highlighted in the customer list window.

Choose **Edit - Update** to display the Call Party Name Display dialog:

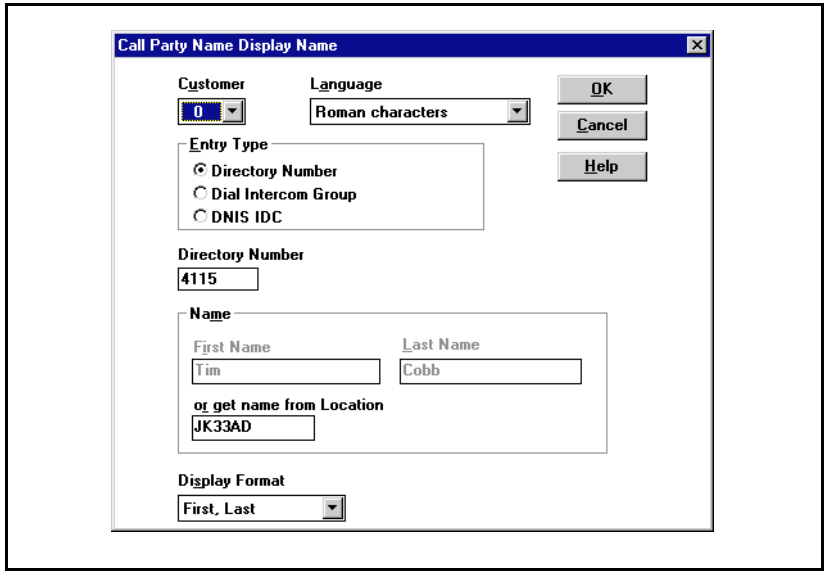
Figure 18
Call Party Name Display dialog



Updating the Name Display Data

Choose **Edit - Update** in the CPND Name view window (or double-click the item in the list) to display the CPND Name dialog for the selected station name. See Figure 19.

Figure 19
CPND Name dialog



Corporate Directory

Overview

The enhanced Corporate Directory feature introduces added capabilities to view, manage, and generate reports using available station information from systems configured with at least one user. To use this feature, you will need the Station Administration application installed and configured correctly as well as Microsoft® Excel 95® or later.

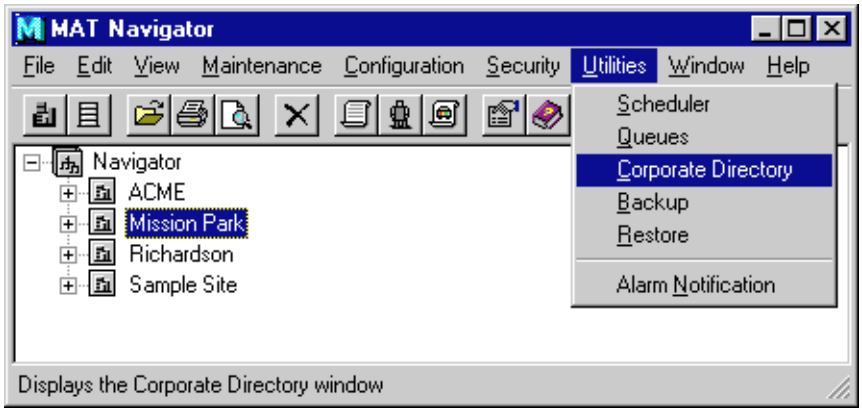
Using Corporate Directory

The enhanced Corporate Directory feature uses a graphical user interface (GUI). Use the convenient menu selections, toolbars, and windows to complete your tasks.

Accessing Corporate Directory

Be sure to have MAT 6 or higher with the Station Administration application installed and configured correctly. Start MAT and from the Navigator window, select **Utilities-Corporate Directory**. See Figure 20.

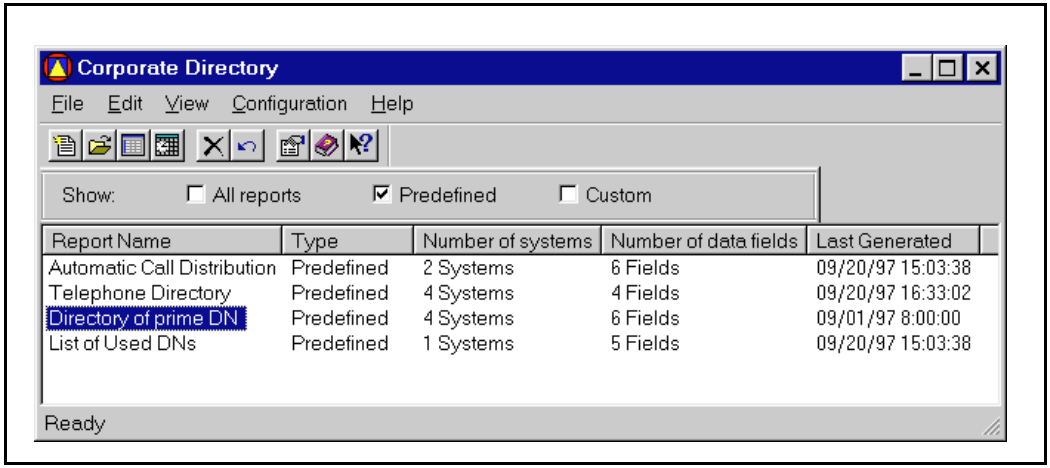
Figure 20
Accessing Corporate Directory



Corporate Directory Window

The Corporate Directory main window presents a graphical way to work with station information. Use this window's commands from the drop down menus or the toolbar to view, manage and generate your reports. You will see a list of predefined report formats the first time the main Corporate Directory window is launched. See Figure 21.

Figure 21
Corporate Directory main window



Each report format has the following attributes, as noted by the column headers.

- Report Name - names of available reports
- Type - notes if the report is either predefined or customized
- Number of systems - number of systems for which the report will be generated
- Number of Data Fields - number of data fields in the report
- Last Generated - date and time when the report was last generated

Note: Double-clicking on a report name displays that report's property sheet. See "Report properties" on page 88.

Working with the Corporate Directory window

Use this window's commands from the drop down menus or the toolbar to view, manage and generate your reports.

Menu selections

Commands in Corporate Directory are available from the pull down menus. The tables below describe the available commands.

Table 1
File menu selections

Selection	Description
Generate Report/ Now	Shows a dialog box where the user selects a display method for the report. A report may be displayed on screen in a spreadsheet, printed to a default printer, or saved to a text file.
Generate Report/ Schedule	Shows a dialog box where the user selects a report destination and a specific date and time and other scheduling properties for the report.
Generate Report/ Open	Opens a previously generated and saved report for the selected item and displays it in a spreadsheet format. If no such report is available, a message box appears asking the user to verify the path and file name of the export file or regenerate the report.
Properties	Opens the property sheet for the selected report and allows the user to configure the report.
Close	Saves the window's current settings and exits the application.

Table 2
Edit menu selections

Selection	Description
Undelete Report	Recovers the last deleted user-customized report.
Delete Report	Removes the selected user-customized report. Predefined reports cannot be deleted.

Table 3
View menu selections

Selection	Description
Toolbar	Displays or hides the tool bar. The menu shows a checkmark next to the item when the toolbar is displayed.
Status Bar	Displays or hides the status bar. The menu shows a checkmark next to the item when the status bar is displayed.
Filter Toolbar	Displays or hides the filter bar. The menu shows a checkmark next to the item when the filter bar is displayed.

Table 4
Configuration menu selections

Selection	Description
Add Report	Displays a new report property sheet. Use this to create a customized report.
Column Name	Displays a dialog box where the user defines column names for data fields.

Table 5
Help menu selections

Selection	Description
Help Topics	Displays the index of help topics.
What's This	Provides context-sensitive help on the next item you select. Clicking anywhere else takes you to the first topic in the help topic list.
About Corporate Directory	Displays information about the application.

Toolbar

The toolbar provides another way of executing menu commands. Common tasks are available from the tool bar. See Figure 22.

Figure 22
Corporate Directory tool bar

The following table describes the function of each button.

Table 6
Toolbar buttons (Part 1 of 2)

Button	Description
	Add Report
	Open Report
	Generate Report
	Schedule Report
	Delete Report
	Undelete Report

Table 6
Toolbar buttons (Part 2 of 2)

	Properties: Displays information about the application
	Help Topics: Displays the index of help topics
	Context Help: Provides context-sensitive help on the next item you select. Clicking anywhere else takes you to the first topic in the help topic list.

Filter Bar

Use the filter bar to show reports in the Corporate Directory window, based on their type. The default setting displays all reports. See Figure 23.

Figure 23
Filter tool bar

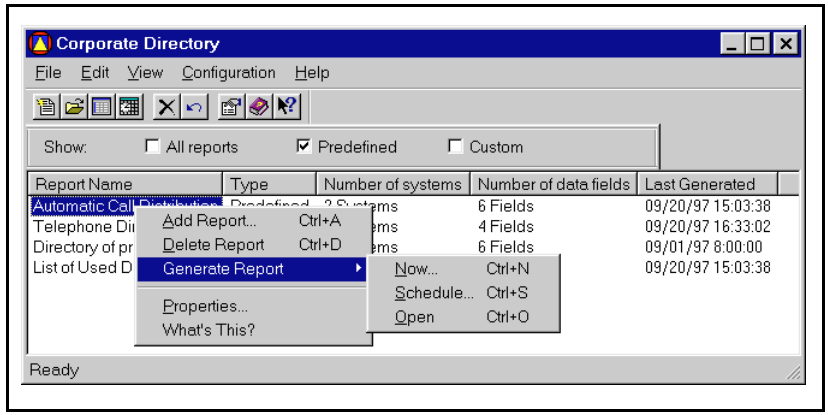
The available settings are:

- All Reports: displays all reports, predefined and customized
- Predefined: displays only the predefined reports
- Customized: displays only the customized reports

Pop-up menus

Pop-up menus show the available commands for a selection. Pop-up menus are activated by clicking the right-mouse button while the cursor is in the report list portion of the Corporate Directory window. Unavailable commands are dimmed. Menu items from the pop-up menu behave identically to the menu items in the pull down menus. See Figure 24.

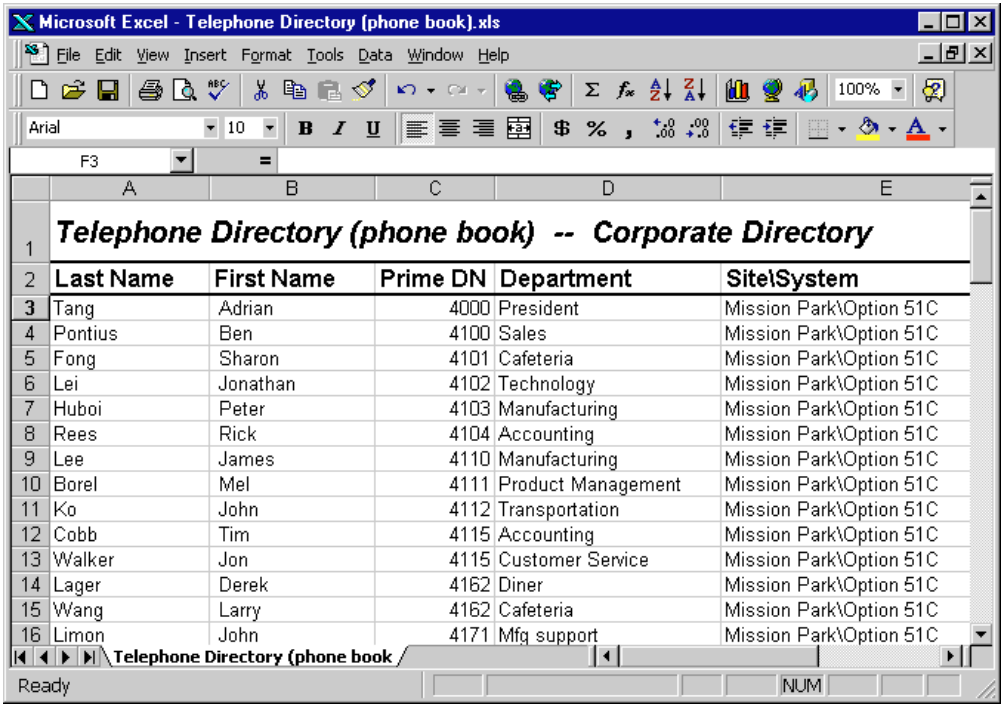
Figure 24
Pop-up menu



Generating Reports

The Corporate Directory feature lets you view, manage, and generate reports using available station information from systems configured with at least one user. Reports can be viewed on screen, printed, or saved to a file. Report layout and formatting is done through Microsoft Excel. See figure 25 for an example of a typical report format.

Figure 25
Typical report format



	Last Name	First Name	Prime DN	Department	Site\System
3	Tang	Adrian	4000	President	Mission Park\Option 51C
4	Pontius	Ben	4100	Sales	Mission Park\Option 51C
5	Fong	Sharon	4101	Cafeteria	Mission Park\Option 51C
6	Lei	Jonathan	4102	Technology	Mission Park\Option 51C
7	Huboi	Peter	4103	Manufacturing	Mission Park\Option 51C
8	Rees	Rick	4104	Accounting	Mission Park\Option 51C
9	Lee	James	4110	Manufacturing	Mission Park\Option 51C
10	Borel	Mel	4111	Product Management	Mission Park\Option 51C
11	Ko	John	4112	Transportation	Mission Park\Option 51C
12	Cobb	Tim	4115	Accounting	Mission Park\Option 51C
13	Walker	Jon	4115	Customer Service	Mission Park\Option 51C
14	Lager	Derek	4162	Diner	Mission Park\Option 51C
15	Wang	Larry	4162	Cafeteria	Mission Park\Option 51C
16	Limon	John	4171	Mfg support	Mission Park\Option 51C

You can either generate a report immediately or with a defined schedule with specific dates, times, and intervals. Generated reports use the data extracted from the MAT database. These reports are automatically saved with a system default name to the default location unless you specify another name or location. A total of ten reports can be automatically saved in this manner. Subsequent saved reports overwrite the earliest ones saved as the system recycles through its default names.

Generate reports now

To generate a report immediately, select the report name from the window and click on the Generate Report Now tool bar button. This displays the Generate Report dialog box. Select one of the three destination options. Click **OK** to start the report generation process or **Cancel** to abort the process. See Figure 26.

Figure 26
Generate Report Now dialog box

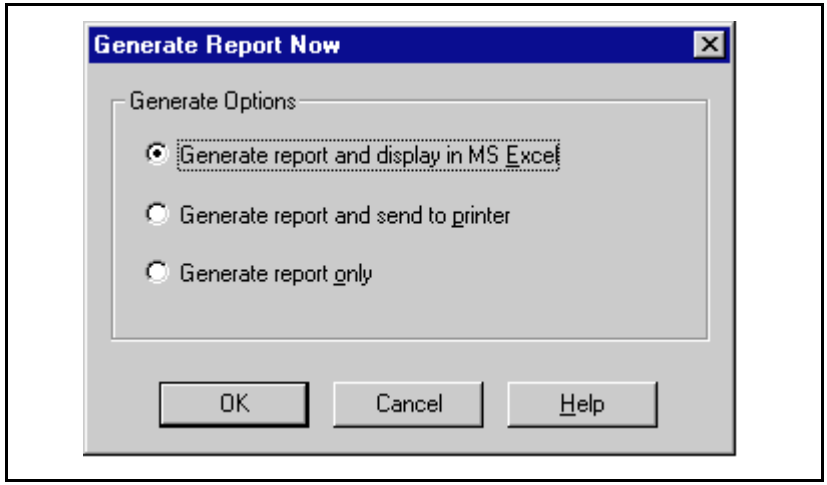


Table 7
Generate Report Now dialog box controls

Control	Description
Generate report and display in MS Excel	Generates a new report and displays it in MS Excel. ***Note:*** You must have MS Excel installed and configured to use this option.
Generate report and send to printer	Generates a new report and sends it to a specified printer
Generate report only	Generates a report and saves it to disk.
OK	Starts the report generation process and closes the window
Cancel	Exits the dialog box without generating a report
Help	Displays the online help topic associated with this dialog box.

Generate reports by schedule

Select the report name from the window and click on the Schedule Report tool bar button. This displays the Schedule Report Generation dialog box. Use this dialog box to select one of two destination options. See Figure 27.

Click **Schedule**... button in this window to show the Scheduling window. Use this window to specify when and how often to generate the report. See Figure 28.

Figure 27
Generate Report Schedule dialog box

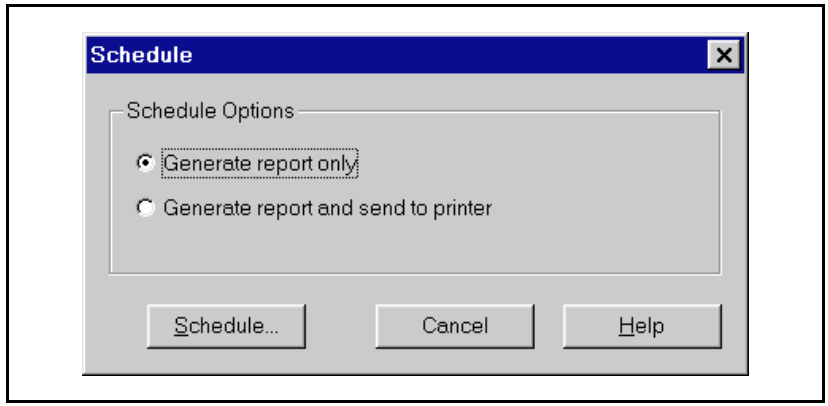
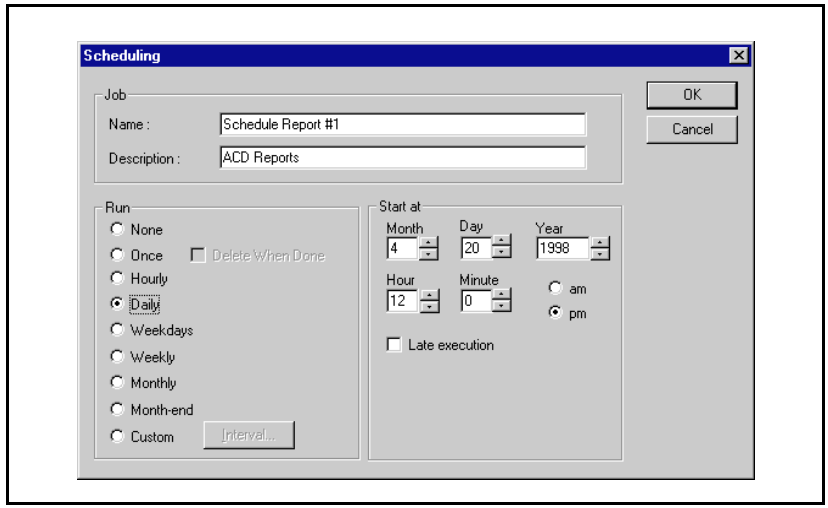


Figure 28
Scheduling window



Report properties

Each report shows a specific set of station data. Corporate Directory provides a set of reports whose properties are already defined. See “Predefined reports” on page 94. You can create customized reports for your specific needs. See “Customized reports” on page 95.

View report properties by double-clicking or clicking the right-mouse button and selecting **Properties** on an available report in the Corporate Directory window. This presents a property sheet with three tabs titled *General*, *Data Fields*, and *Output*. The property sheet contains information specific to the selected report.

There are four buttons common to each property sheet:

- **OK** - saves any changes and exits the property sheet
- **Cancel** - exits the property sheet without saving any changes
- **Apply** - saves the changes without exiting the property sheet
- **Help** - displays help topics for the property sheet

General tab

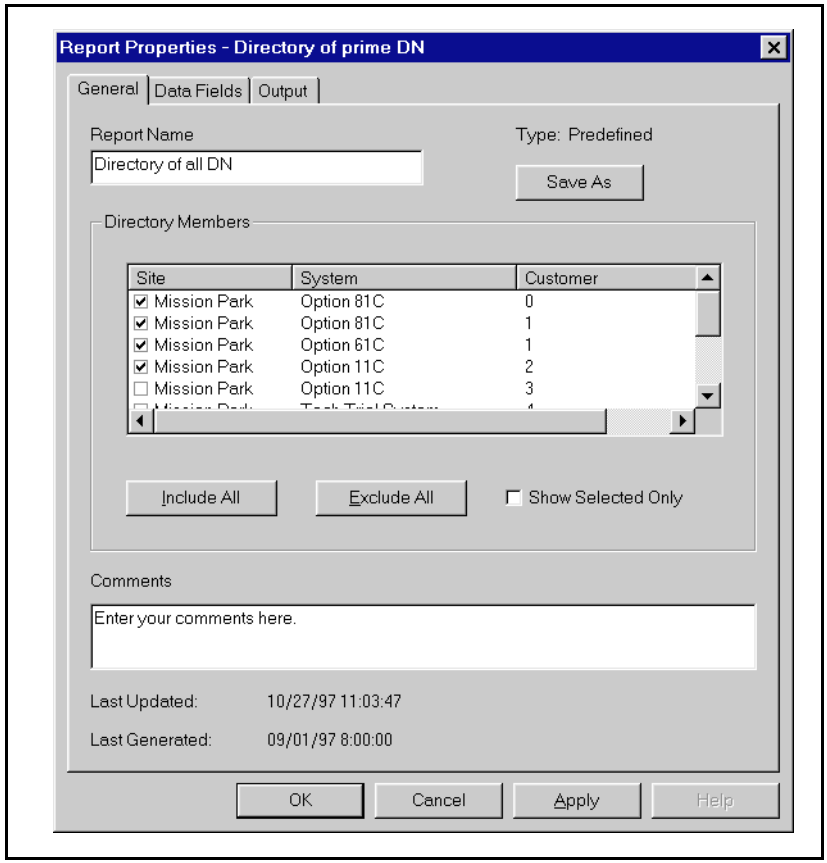
Use the General tab to view or define a report name. Additionally, use the General tab to specify multiple sites and systems for which the report will be generated. All available sites and systems are listed. Click on the check box next to an entry to include it in the report. Click on a marked check box to deselect it and exclude it from the report. Reports are generated with data from all included sites and systems. See Figure 29.

Controls in the General tab include:

- Report Name - displays the report name. New report names are entered here. Users are limited to report names of up to 100 characters.
- Save As - saves the current report as a new customized report. The “type” notation automatically changes from “PREDEFINED” to “CUSTOMIZED” as needed.

  Note: The new report name must be unique. Otherwise, the Save As command fails.

Figure 29
General tab in the Report Properties sheet



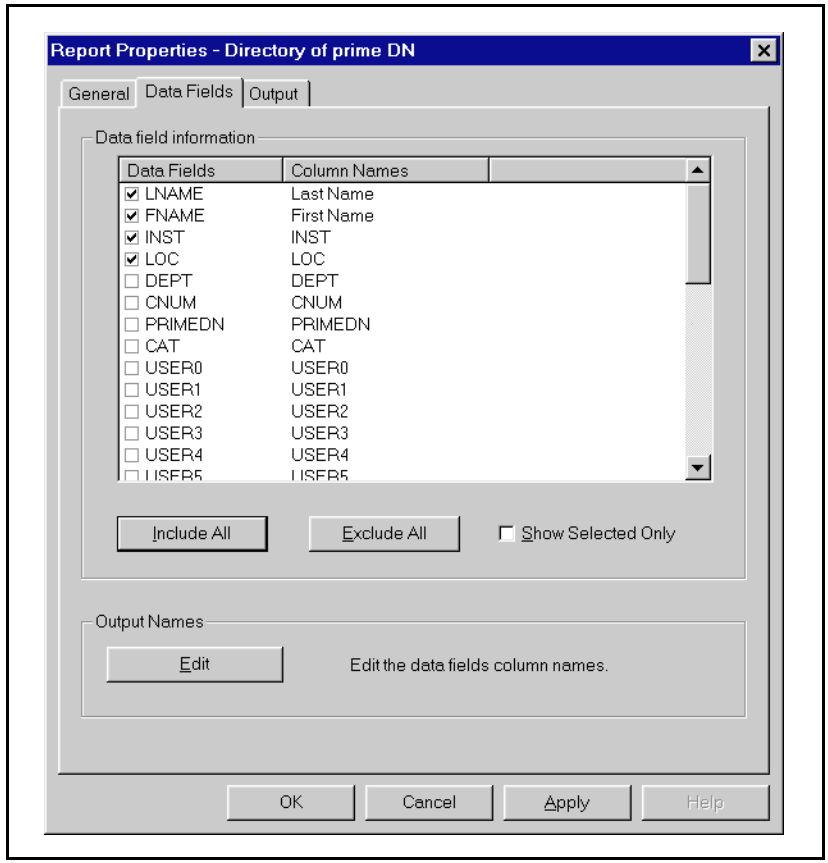
- Directory Members
  - — Sites/System/Customer - displays available sites and system names. Check boxes indicate if the site or system is included in the report
  - — Include All - selects all sites and systems; all boxes are checked
  - — Exclude All - deselects all sites and systems; all boxes are unchecked
  - — Show Selected Only check box - toggles the list to display selected items only or all items
- Comments - accepts user comments up to 256 characters for customized reports only
- Last Updated - displays when the last change was made to the report
- Last Generated - displays when the report was last generated; this field is empty if the report has never been generated

Data Fields tab

Use the Data Fields tab to configure the report's data fields and column names. Supported station data fields are displayed. See "Supported Data Fields" on page 96.

Click on the check box to include that particular field in the report. For each data field, you can specify a column name; otherwise the report uses the default mnemonic. See Figure 30.

Figure 30
Data Fields tab in the Report Properties sheet



Controls in the Data Fields tab include:

- Data Fields - lists all the available station data fields at the corporate level. Use the check box to select or deselect a data field.
- Include All - selects all data fields; all boxes are checked
- Exclude All - deselects all data fields; all boxes are unchecked
- Show Selected Only - toggles the list to display selected items only or all items
- Edit - displays a dialog box to edit the column names for the data fields

Output tab

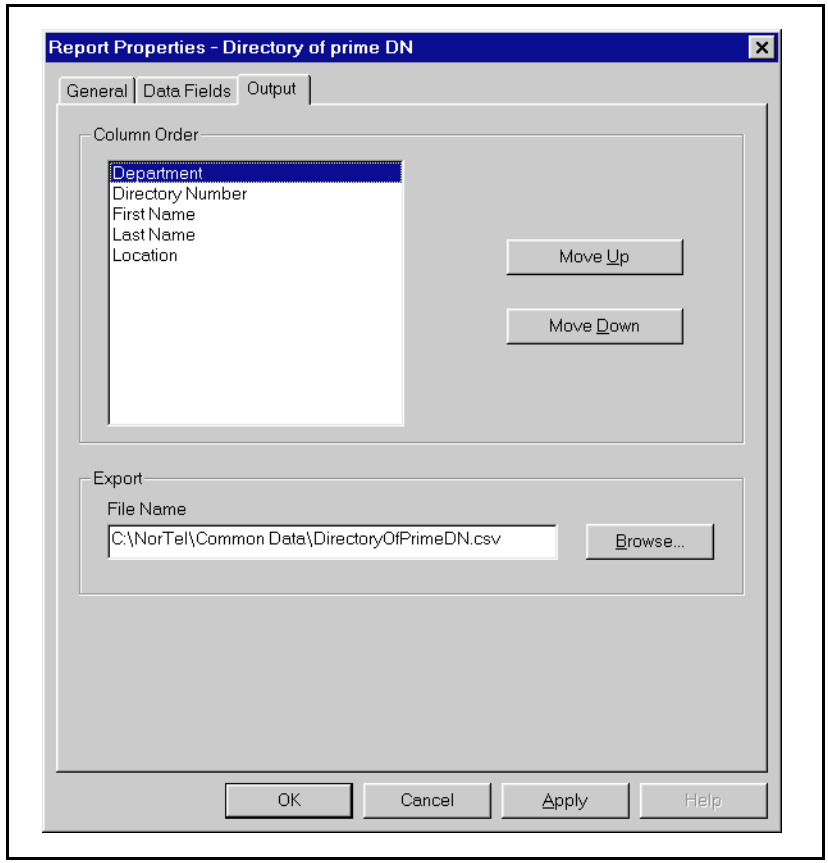
Use the Output tab to define the report's output format and export destination for the results. See Figure 31.

The Output page displays the order the columns appear in the report (left to right). Additionally, it displays the file and path name to be used when the report is generated and saved to a file. Type the path and filename or use **Browse** to navigate the directory structure to find the desired file.

Controls in the Output tab include:

- Move Up - moves the selected column name up the list by one position
- Move Down - moves the selected column name down the list by one position
- File Name - allows the user to enter the path and file name for the export file
- Browse - allows the user to navigate the directory structure to search for a path and file name

Figure 31
Output tab in the Report Properties sheet



Predefined reports

Corporate Directory includes four commonly generated reports as predefined reports. These are listed below along with their data fields and column names.

- Automatic Call Distribution Stations report
  - ACS - Position IDT
  - CLS - Trunk/Call Type Access Restriction
  - SPID - Supervisor Position ID
  - LOC - Location
  - TN - Terminal Name
  - LNAME - Last Name
- Telephone Directory report
  - LNAME - Last Name
  - FNAME -First Name
  - PRIMEDN - Directory Number
  - DEPT - Department
- Directory of Prime DNs report
  - PRIMEDN - Directory Number
  - INST - Intrument Type
  - TN - Terminal Number
  - LOC - Location
  - LNAME - Last Name
  - FNAME - First Name

- Listing of Used DNs report
  - PRIMEDN - Directory Number
  - LNAME - Last Name
  - FNAME -First Name
  - LOC - Location
  - TN - Terminal Number

Customized reports

Use Corporate Directory to create new report formats for your specific reporting needs. On the Report Properties dialog box, select the data fields for the sites and systems.

You can create a customized report by starting with an existing report format. Use the Report Properties dialog box to revise the existing report. Be sure to save the customized report with a new name.

Click **Add Report** to create a new report. This command displays a blank Report Properties dialog box with all options set to “off” by default. The Report Name field is mandatory. The screen presents an error message if this field is left empty when you click **OK** or **Apply**.

Supported Data Fields

The table below lists the acronym and data fields supported by Corporate Directory.

Table 8
Supported Data Fields (Part 1 of 6)

Data Fields	Description
LNAME	Last Name
FNAME	First Name
INST	Instrument
LOC	Location
DEPT	Department
CNUM	Customer Number
PRIMEDN	Prime DN
CAT	Category
USER0	
USER1	
USER2	
USER3	
USER4	
USER5	
USER6	
USER7	
USER8	
USER9	
Comment	

Table 8
Supported Data Fields (Part 2 of 6)

EQUIPMENT	Equipment
SSTAT	Sync Status
AOM	Number of Add on Modules
ECOST	Equipment Cost
COSTID	Cost ID
DIV	Division
DIGS	Dial Intercom Groups
ACDS	Key Assigned to Automatic Call Distribution (ACD)
ADN	All Directory Numbers
EHTK	External Hunt DN
EFDK	External Forward DN
AAA	Automatic Answer Back
AEFD	Alternate External Flexible Call Forward
AEHT	Alternate External Hunt DN
AGTA	ACD Agent Analog Telephone
AHNT	Alternate Hunt DN
ALDR	M3000 Directory Lock - Discontinued
AOS	observation of Supervisor
AUTU	Station Specific Authcodes
CCSA	Controlled Guest Telephone
CDEN	Card Density
CFHA	Call Forward/Hunt Override

Table 8
Supported Data Fields (Part 3 of 6)

CFTA	Call Forward by Call Type
CFXA	Call Forward External
CLS	Trunk/Call Type Access Restriction
CNDA	Call Party Name Display
CNIA	Call Number Information
CRCS	Flexible Code Restriction Class
CWA	Call Waiting - from Incoming Trunk
CWNA	ACD Call Waiting Notification Set
DDGA	Present/Restrict Calling Number
DDS	Digit Display
DELA	Dealer Allowed
DES	1-6 Character Designator
DIG	Dial Intercom Group<space>Member
DN	Station Directory Number
DNDA	Dialed Number Name Display
DPUA	Directory Number Pickup
EFD	CFNA DN for External Calls with CFTA
EHT	Hunt DN for External Calls with CFTA
FBA	Call Forward Busy for DID Calls
FCAR	Force Charge Account
FDN	Flexible Call Forward No Ans DN
FNA	Call Forward No Answer
GPUA	Group Pickup

Table 8
Supported Data Fields (Part 4 of 6)

HBTA	Hunt by DID Call Type
HFA	Hands Free
HSPA	Hospital Room with DID Management
HTA	Hunting
HUNT	Hunt DN - All Calls, or Internal Calls Forward
IAMA	Intercept Computer Answering Machine
ICT	Intercept Computer Terminal/Printer
IPNA	Intercept Position
IRGA	Intercept Computer Interrogation Set
LANG	Language for Automatic Wake Up
LDN	Departmental LDN
LHK	Last Hunt Key for Short Hunt
LNA	Last Number Redial
LPA	Message Waiting Lamp
MCRA	Multiple Call Arrangement DN
MCTA	Malicious Call Trace
MLWU_LANG	Language for Automatic Wake Up
MRA	Message Registration
MTA	Maintenance Set
MWA	Message Waiting at Message Service
NAMA	Present/Restrict Calling Name
NCOS	Network Class of Service

Table 8
Supported Data Fields (Part 5 of 6)

PDN	Calling Line ID from Prime DN
PRI	ACD Agent Priority Level
PUA	Call Pickup
RCC	Restricted from Receiving Collect Call
RNPG	Ringing Number Pick-up Group
RTDA	Call Redirection by Time of Day
SCPW	Station Control Password
SFA	Second Level CFNA
SFDN	Secretarial Forwarding DN
SFLT	Secretarial Filtering Boss/Secretary
SGRP	Scheduled Access Restriction Group
SPID	Supervisor Position ID
SPV	ACD Supervisor/Agent
SSU	System Speed Call List Number
TEN	Multi-Tenant Number

Table 8
Supported Data Fields (Part 6 of 6)

TENA	Tenant Service
TGAR	Trunk Group Access Restriction
TN	Terminal Number
TSA	Three Party Service
USMA	Meridian 911 Position
VISI	Visiting Portable
VMA	Virtual Message Agent
WRLS	Wireless
XLST	Pretranslation
XRA	Ring Again

List Manager

This section contains information about how to use List Manager. The List Manager module allows you to work with the following list types:

- Speed Call and System Speed Call—allows a user to place a call to a telephone number by dialing a short code. These codes are managed as entries in a Speed Call list.
- Group Call—allows a user to place a call to a list of DNs at the same time by pressing the Group Call key.
- Group Hunt—allows the system to route an unanswered call to the next idle DN in a prearranged hunt chain (or list), based on the Group Hunting Pilot DN linked with the station's Prime DN.

Summary of List Manager

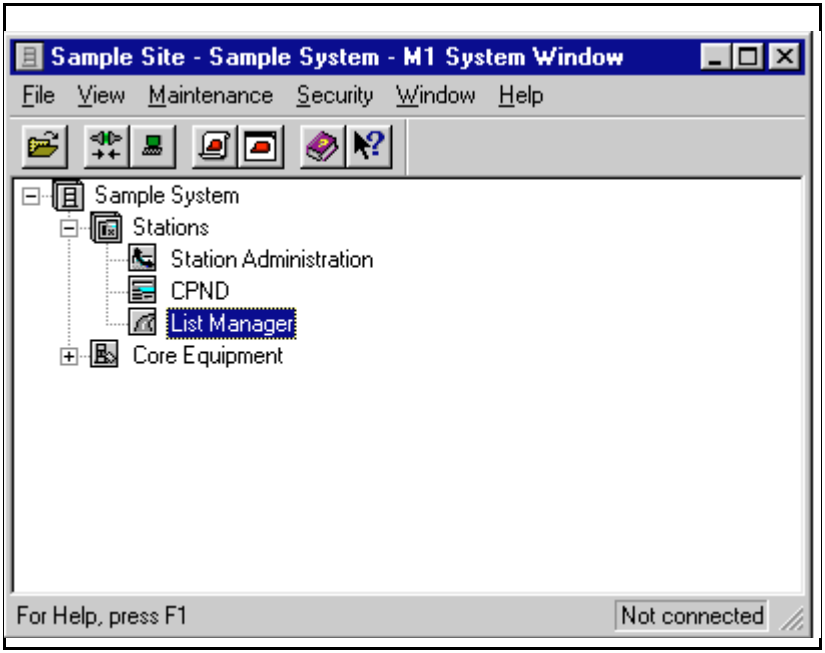
List Manager allows you to perform the following functions:

- Create and modify lists
- Create multiple lists with one operation
- Copy and paste lists from one system to another
- Work with list templates
- Set default properties for all lists of a given type
- Assign a station to a list (In the Stations module you can assign a list to a station)
- Assign a Pilot DN to a list
- Print reports on list usage

Open List Manager

Figure 32 shows where to access List Manager from within the System Window.

Figure 32
MAT System Window



To open List Manager for a system:

1. From the MAT Navigator, open the system window for the selected system.
2. In the System window tree control, open Stations.
3. Double-click the List Manager icon.

   The List Manager window opens.

Download list data from the Meridian 1

If list data is present on the system, download the list data to MAT the first time you open List Manager. You can synchronize each list type separately or synchronize all list types at once.

To download list data from the Meridian 1 system:

1. Select a list type in the List Type view or select the item called "List Manager" to download data for all list types.
2. Choose menu **Synchronize - Retrieve - Now**. The List Manager Sync window appears (Figure 33).

   List Manager automatically logs in to an idle TTY port and downloads list data to the MAT PC.
3. Wait until the Synchronization Status section displays the following message:

   Logged out from the switch
4. Click **Close**.

Synchronization Considerations

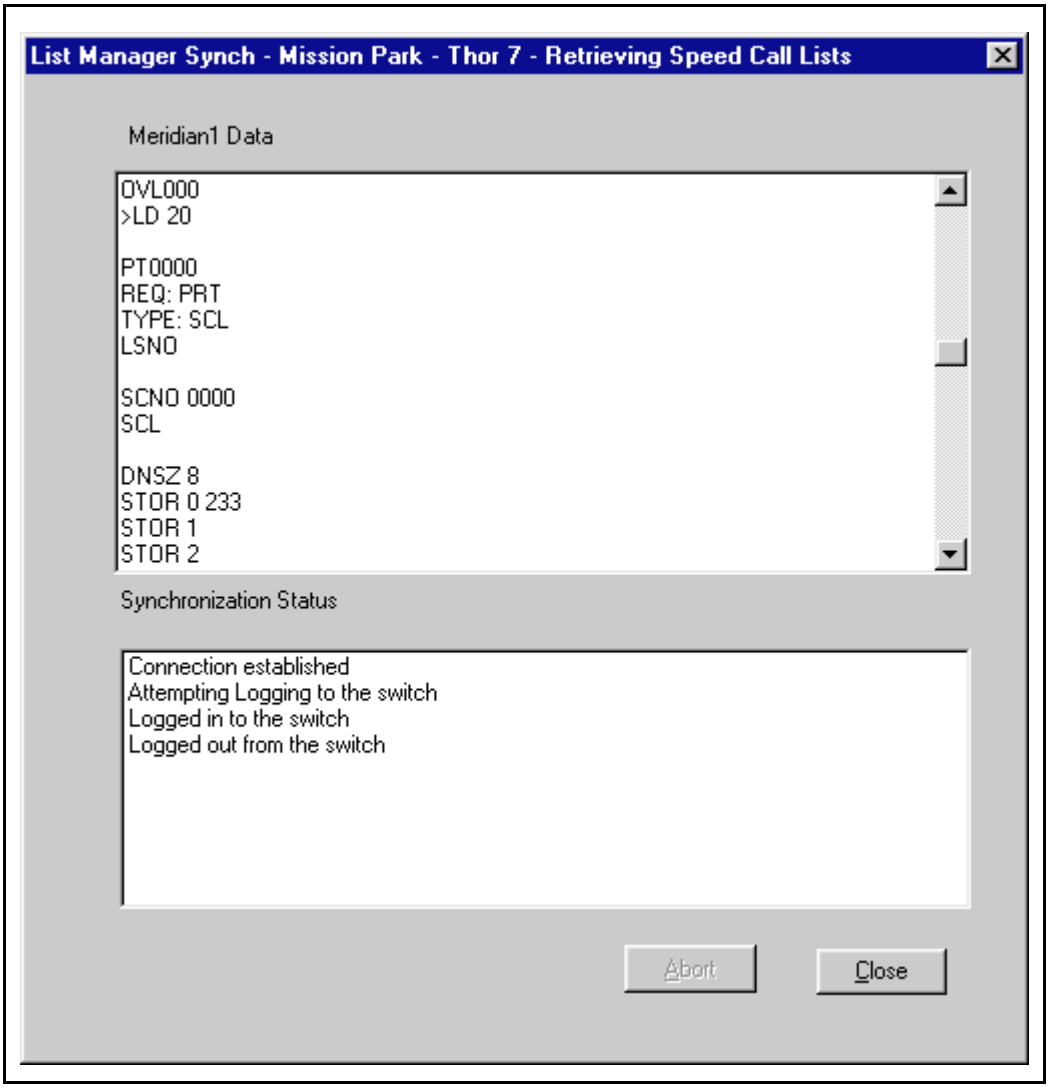
You can transmit data to program a Meridian 1 system with relevant list data defined in MAT's List Manager application. List Manager can also retrieve list data from a Meridian 1 system, where it can be viewed and modified.

If you have a Meridian 1 with list data already programmed, you should first download the data to MAT (See "Download list data from the Meridian 1" on page 105.). Then you can modify the data and upload the changes to the Meridian 1 system.

Use the Synchronize menu to schedule communications with the system. Synchronization is a task that ensures the list data in MAT matches the data on the Meridian 1 system. Synchronization can be achieved in one of two ways, as follows:

- Retrieve data from the Meridian 1 to MAT (download)
- Transmit data from MAT to the Meridian 1 (upload). ***Note:*** Generally, you should transmit list data before transmitting station data. This ensures that the list is present on the system before Station Administration assigns feature key access to the list.

Figure 33
List Manager Sync window



Synchronization Status

When MAT performs a data retrieval, the synchronization status of each list determines whether the data is updated. The following status indicators define how the list is affected during a synchronization:

- **NEW**: Data has been defined, but not uploaded to the Meridian 1.
- **TRN** (transmit): Data is synchronized with the Meridian 1.
- **OUT**: Data is removed from MAT and will be deleted from the Meridian 1 during the next synchronization.
- **CHG** (change): Data has been changed, but the changes have not been uploaded to the Meridian 1.
- **RPL** (replace): Data in the Meridian 1 system is replaced with new data during the next synchronization.

List Manager automatically sets the synchronization status of each list. For example, if you modify parameters of an existing list, the synchronization status is set to CHG (change).

Change Synchronization Status

You can change the synchronization status of each list in List Manager. For example, if you change parameters for a list, but do not want the changes to take affect on the system right away, you can change the synchronization status of the list to TRN.

To change the synchronization status of a list in List Manager:

1. Select a list.
2. Choose menu **Edit - Change Status to** and choose a new status from the available choices.

Station Synchronization vs. List Synchronization

List Manager synchronization is a separate task from Station Administration synchronization. After you synchronize list data, you should synchronize station data.

Synchronize list data before synchronizing station data. Some List Manager settings make changes in MAT's Station Administration module (for example, feature key assignment). You must ensure the list data is present on the system so that station validation does not fail.

Synchronize List Manager with the System

You must periodically synchronize List Manager data with data on the Meridian 1 system.

Upload

To upload data from MAT List Manager to the Meridian 1 system:

1 In the List Type view, select the list type that you want to synchronize or select "List Manager" to synchronize all list types.

2 Choose menu **Synchronize - Transmit - Now**. The List Manager Sync window appears (see Figure 33).

3 When the Synchronization status area displays "Logged out from the switch," click **Close**.

The selected list type is synchronized with the Meridian 1 system.

Download

To download data from the Meridian 1 system to MAT List Manager:

1 Select the list type that you want to synchronize or select "List Manager" to synchronize all list types.

2 Choose menu **Synchronize - Receive - Now**. The List Manager Sync window appears (see Figure 33).

3 When the Synchronization Status area displays "Logged out from the switch," click **Close**.

The selected list type is synchronized with the Meridian 1 system.

List Manager Window

The List Manager window is divided into two sections:

- List Type view—allows you to select a list type. Lists of the selected type appear in the List Detail view. You can also select List Manager to perform global operations.
- List Details view—allows you to select one or more lists of a specific type. You can select a list and edit its properties, or copy the list data.

  Note: If you choose menu **View - Templates**, the List Details view shows list templates.

Figure 34 shows the List Manager window.

Figure 34
List Manager window

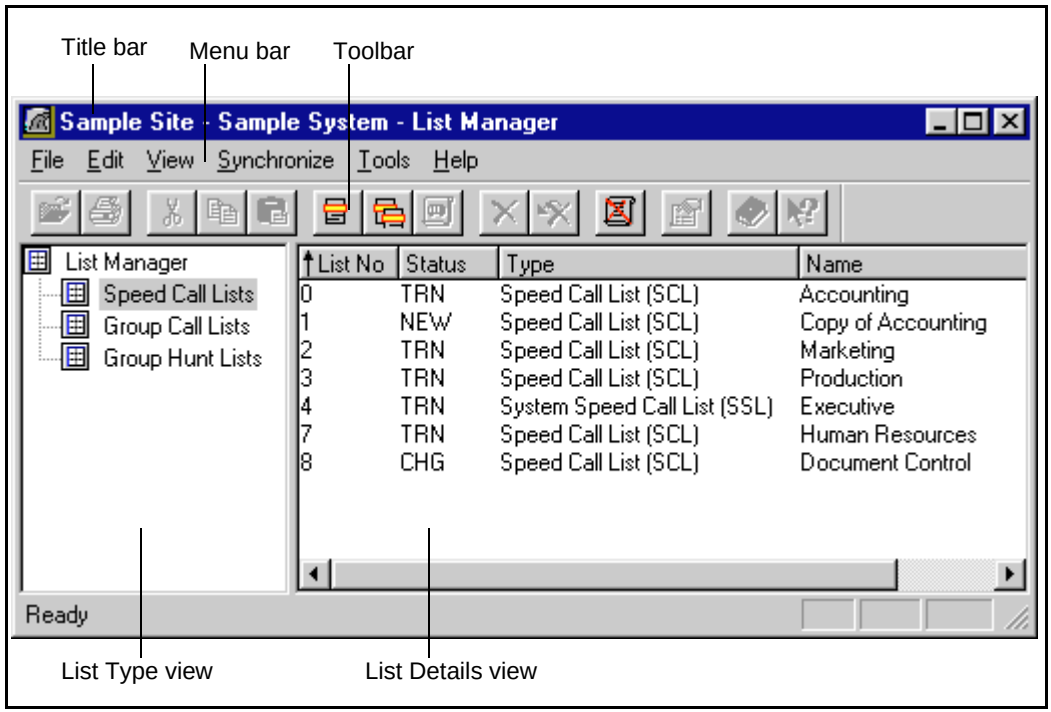


Figure 34 calls out the following List Manager components:

- **Title Bar**—Identifies the system and contains standard Windows controls to minimize, maximize, and close the window.
- **Menu Bar**—Provides easy access to List Manager commands
- **Toolbar**—Provides easy access to List Manager commands
- **List Type view**—Allows you to select which type of list to access
- **List Details view**—Displays all lists of the selected type, including the list number, synchronization status, list type, and list name

The List View

Choose **View - Lists** to display lists defined for the system. Each list contains the following information:

List Number: Unique number used to identify the list on the system

Type: Type of list, based on the Meridian 1 feature it supports (Speed Call, System Speed Call, Group Call, Group Hunt).

Sync Status: An indication of whether Meridian 1 data and the data in MAT are synchronized. The following information defines the synchronization status for each list:

- **NEW**: List data defined in MAT, but not uploaded to the Meridian 1.
- **TRN**: List data is synchronized with the Meridian 1.
- **CHG**: List data has been modified in MAT but not in Meridian 1.
- **RPL**: List data defined in MAT to replace synchronized station data.
- **OUT**: A synchronized list deleted from MAT but not yet from the Meridian 1.

Name: A name entered in List Manager, used to identify this list.

The Template View

Choose menu **View - Templates** to display list templates defined for the system. The display contains the same information for a template as the List view contains for a list.

Templates provide data that is common among many individual lists. In a single operation, using a template, you can define multiple lists which have data in common. A template can contain all or part of a list definition. You can change template data in exactly the same way as station data.

List Manager Menus

List Manager's menus consist of the following:

- **File**
  - **Open**: Display the property sheet of the selected list or template.
  - **New**:
    - **List**: Create a new list. Displays the New List property sheet.
    - **Multiple Lists**: Create more than one new list. Displays the Multiple List Creation dialog.
    - **Template**: Create a new template. Displays the New Template property sheet.
  - **Print Setup...**: Select a printer and a printer connection
  - **Reports**: Select a Report
  - **Properties**: Display the property sheet of the selected list or template.
  - **Close**: Close the List Manager window.

- **Edit**
  - **Undo**: Reverse the most recent command.
  - **Cut**: Remove the selected list(s) or text and place it on the clipboard.
  - **Copy**: Place a copy of the selected list(s) on the clipboard.
  - **Paste**: Insert a copied list into the List Details view.
  - **Delete**: Remove the selected list(s) from the List Manager window.
  - **Select All**: Selects all lists in the List Manager Display View.
  - **Change Status to**:
    - **NEW**: Change the synchronization status of the selected list to NEW. Data has been defined, but not uploaded to the Meridian 1.
    - **TRN**: Change the synchronization status of the selected list to TRN (transmitted). Data is synchronized with the Meridian 1.
    - **OUT**: Change the synchronization status of the selected list to OUT. Data is removed from MAT and will be deleted from the Meridian 1 during the next synchronization.
    - **CHG**: Change the synchronization status of the selected list to CHG (change). Data has been changed, but the changes have not been uploaded to the Meridian 1.
    - **RPL**: Change the synchronization status of the selected list to RPL (replace). Data in the Meridian 1 system is replaced with new data during the next synchronization.
- **View**
  - **Toolbar**: Displays or hides the Toolbar.
  - **Status Bar**: Displays or hides the Status Bar.
  - **Lists**: Change the display view to show lists.
  - **Templates**: Change the display view to show templates.

- **Synchronize**
  - **Transmit**:
    - **Now**: Transmit data from MAT to the Meridian 1.
    - **Schedule**: Schedule a transmission of data from MAT to the Meridian 1.
    - **View Last Transmit**: Display a log file showing results of the last data transmission.
  - **Retrieve**:
    - **Now**: Retrieve data from the Meridian 1 to MAT.
    - **Schedule**: Schedule a retrieval of data from the Meridian 1 to MAT.
    - **View Last Retrieve**: Display a log file showing results of the last data retrieval.
- **Tools**
  - **Delete Unused Lists**: Display the Delete Unused Lists dialog.
  - **Options**: Displays the Options dialog.
- **Help**
  - **Help Topics**: Display the list of Help topics.
  - **What's This**: Provides context-sensitive help on the next item you select. Clicking anywhere else takes you to the first topic in the help topic list.
  - **About List Manager**: Display release information for the List Manager window.

Toolbar

The List Manager toolbar includes several useful buttons. The function of each button in the toolbar appears when you hold the mouse cursor over the button. Toolbar buttons provide shortcuts to some of the same commands found in the menus.

Work with List Manager

This section provides procedures to help you use List Manager to perform common tasks.

Create a New List

You can create a new list in List Manager and upload the data to the Meridian 1. The synchronization status of the new list is **NEW**. You must transmit the list data to the Meridian 1 for the new list to become active.

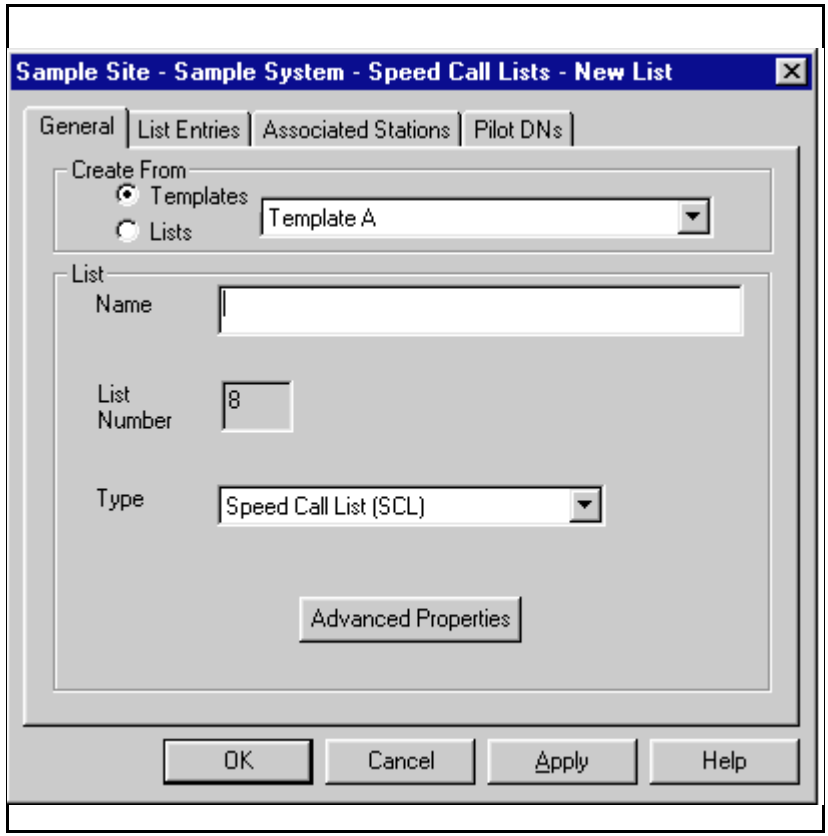
To create a list:

1. In the List Type view, select the type of list you want to create.
2. Choose **File - New - List**. The New List (General) property sheet appears.

   Note 1: The New List property sheet for each list type is the same as the standard property sheet for that list type. Some default values for the new list are automatically entered.

   Note 2: You can edit some of the default values for a new list. To edit the list number, the option for Auto List Number Allocation (**Tools - Options**) must be unchecked.
3. Select either a template or an existing list to use as a basis from which to create the new list.
4. Enter a list name (up to 50 characters, alphanumeric).
5. Select the list type.
6. Click **OK** or **Apply**. Click **Apply** if you want to modify list parameters. Click the tabs along the top of the property sheet to view various parameters.

Figure 35
Speed Call List Properties (General)



Create a List Template

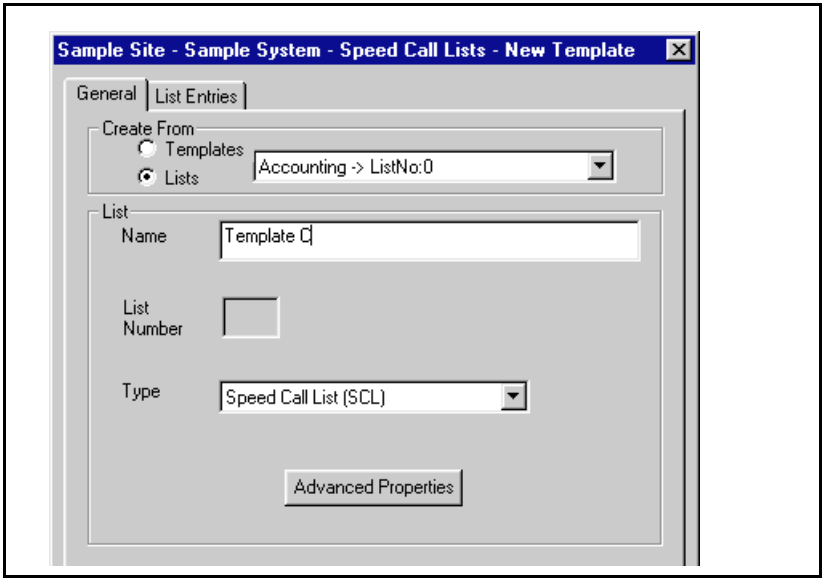
You can create a list template or modify an existing template. Templates provide data that is common among many individual lists. A template allows you to define multiple lists that share common elements.

To create a list template:

1. Choose menu **View - Templates**.
2. Choose menu **File - New - Template**. The New Template (General) dialog appears.
3. Select either a template or list to use as a basis from which to create the new template.
4. Enter a template name (up to 50 characters, alphanumeric).

   Note: The List Number field does not apply when creating a template.
5. Select the list type to which this template applies.
6. Click **OK** or **Apply**.

Figure 36
New Template dialog

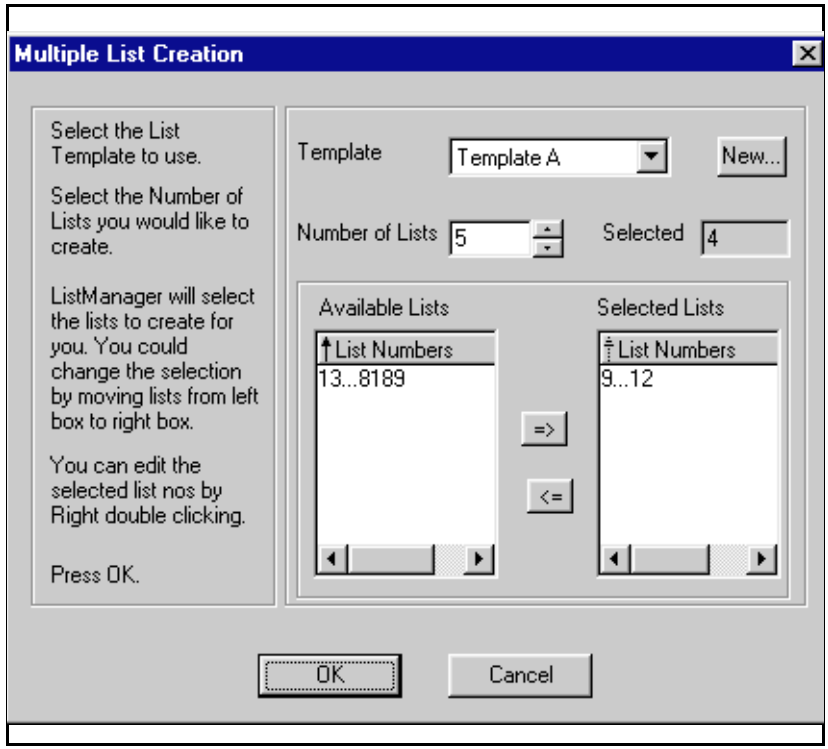


Create Multiple Lists

You can create multiple lists with a single operation. You must have a valid template that corresponds to the list type that you want to create. After creating the lists, you should modify each list to provide its unique parameters.

Figure 37 shows the Multiple List Creation dialog.

Figure 37
Create multiple lists



To create multiple lists:

1 Choose menu **View - Lists**.

2 Choose menu **File - New - Multiple Lists**. The Multiple List Creation dialog appears (Figure 37).

3 Select a template or click **New** to create a template on which to base the new lists. The template will provide common data shared among the lists.

4 Set the number of lists to create.

5 Select the list numbers of the lists to create. Select a range of numbers in the Available Lists field and click the right arrow.

List Manager will place the correct number of lists into the Selected Lists field.

Note 1: In the Available List field and the Selected List field, list numbers are represented as ranges. For example, a range of list numbers from 11 to 20 is represented as follows:

11...20

If you want to create 25 lists and you select the above range, you must still select 15 more list numbers. Select another range to continue adding list numbers to the Selected Lists field. List Manager automatically stops adding list numbers when you reach the correct number, as set in the Number of Lists field.

Note 2: You can select a subset of a list range. After moving a range, use the right mouse button to double-click on the selected range. You can edit the range to select a subset of the range. For example, if the selected range is 2...10, you can enter 2...9 or 3...8 (but not 1...11).

6 If there are not enough list numbers available in the selected range, select another range and click the right arrow. Continue until you reach the correct number of lists to create.

7 Click **OK**.

Delete Lists

You can select a list or a template and delete it from the system. You can delete all unused lists from the system with one command. The next time you synchronize List Manager lists, the deleted lists are removed from the system.

To delete a list from the system:

1. Choose menu **View - Lists**.
2. In the List Type view, select the list type. In the List Details view, select the list.
3. Choose menu **Edit - Delete**. A confirmation box appears, stating,

   "Are you sure you want to delete the list(s)/template(s)".
4. Click **Yes**.

To delete a template from List Manager:

1. Choose menu **View - Templates**.
2. In the List Type view, select the list type. In the List Details view, select the template.
3. Choose menu **Edit - Delete**. A confirmation box appears, stating,

   "Are you sure you want to delete the list(s)/template(s)".
4. Click **Yes**.

To delete all unused lists of a specific type from the system:

1. In the List Type view, select the list type.
2. Choose menu **Tools - Delete Unused Lists**. The Delete Unused Lists dialog appears. All unused Speed Call lists are displayed.
3. Select the lists you want to delete.
4. Click **OK**.

   The synchronization status of the deleted lists is changed to OUT.

Manage List Data

MAT displays list data in a property sheet that graphically represents the list data. You can manage individual list entries. Data change is described for a typical list. Most lists contain a subset of the data for this example, and the update procedure for each field and function is the same as that described here.

Whenever you modify list data that has already been synchronized with the switch, the Sync Status for that list is set to **CHG**. This is an indication that MAT and Meridian 1 are not in sync.

View and modify list (or template) details

Each list has various properties that define the list. Some properties are shared among all lists of a given type; some properties are unique to a specific list. List Manager property sheets allow you to view and modify all of the various list properties.

To view list details and modify list details:

1. Choose menu **View - Lists**.

   Note: You can choose menu **View - Templates** to work with List Manager templates.

2. In the List Type view, select a list type.
3. In the List Details view, double-click a specific list. The property sheet for the selected list appears.
4. Make changes as desired. Click the various tabs to view and modify different list parameters.
5. Modify data in the appropriate fields. If you make changes, click **Apply** before you move from one tab to the next.
6. When you have completed the changes, click **OK**.

Set Advanced Properties

You can change advanced properties for a specific list. Most of the advanced properties have default values that are set in the Options dialog (see “Set Global List Options” on page 131).

To set advanced properties for a list (Speed Call and Group Hunt):

1. Select a list and choose menu **File - Properties**. The property sheet for the selected list appears.
2. On the property sheet General tab, click **Advanced Properties**. The Advanced Properties dialog appears (Table 9).

Table 9
Advanced properties for Speed Call lists and Group Hunt lists

Field	Description
Network Class of Service	Select a Network Class of Service, as defined on the Meridian 1 (applies to System Speed Call lists).
Max. DN Size	Select the maximum length of DNs in the list. The default value is set in the Options dialog (**Tools - Options**).
Max. List Size	Select the maximum number of entries allowed in the list. The default value is set in the Options dialog (**Tools - Options**).
Memory Usage - in Words	
Free Memory Available	Indicates how much Meridian 1 system memory is available for all lists, as of the last synchronization.
Used by List	Meridian 1 system memory required for this list.

3. Make change as necessary.
4. Click **OK**.

Modify List Entries

You can view and modify list entries within each list.

To modify list entries:

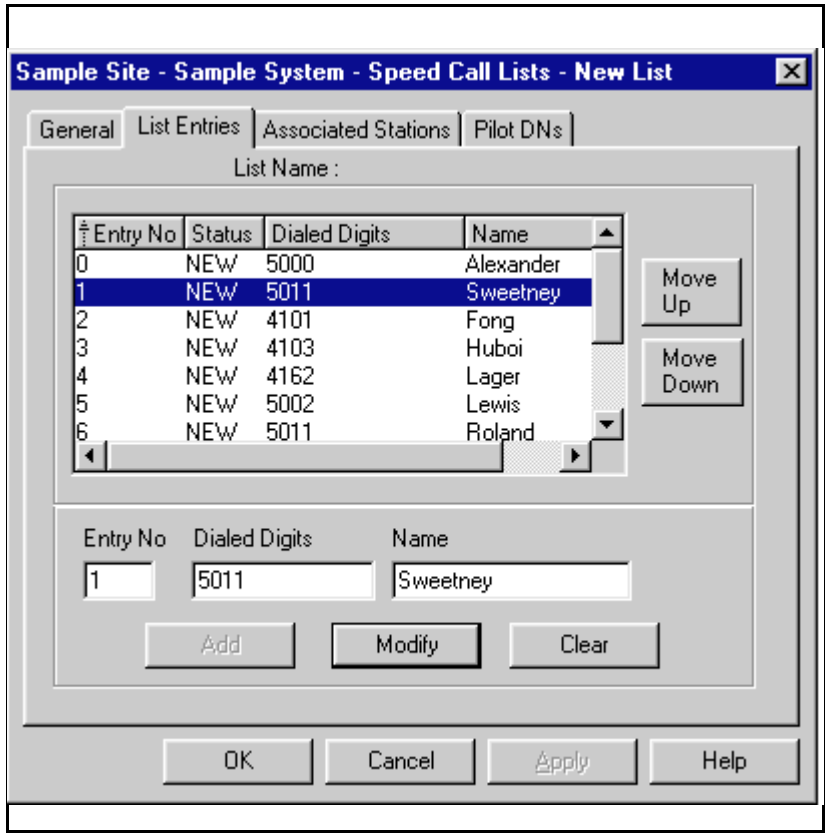
1. Choose menu **View - Lists**.
2. In the List Type view, select a list type.
3. In the List Details view, double-click a specific list. The property sheet for the selected list appears.
4. Click the List Entries tab. The List Entries tab lets you modify parameters for each list entry number.
5. Use the List Entries buttons to modify list entries, as shown in Table 10:

Table 10
List Entries buttons

Button	Description
Add	Add a new entry to the list.
Modify	Modify the selected list entry.
Clear	Clear the selected list entry.
Move Up Move Down	Use these buttons to change the entry number of the selected entry. **CAUTION**: Be careful when you make changes to list entry numbers. This operation re-orders the entry numbers in a list. For example, if you move entry number 10 up to number 2, then entry number 2 becomes number 3, number 3 becomes number 4, and so on. For Speed Call lists, these changes affect the short key used to dial each list entry. For Group Hunt lists, these changes affect the order of the hunt chain.

6. Click **OK** or **Apply**.

Figure 38
Speed Call List Properties (List Entries)



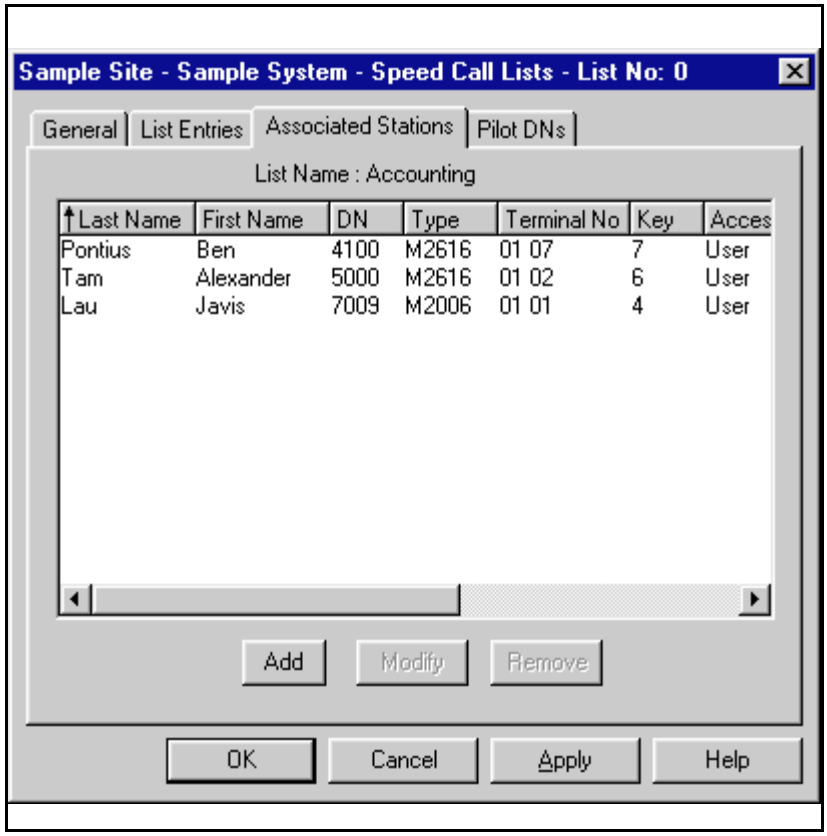
Work with Stations

Use the List Properties (Associate Stations) dialog to assign a feature and its associated list to one or more stations (telephones).

> ***Note:*** This operation modifies the entries in the Station Administration module. You must synchronize stations from Station Administration to change these settings on the Meridian 1 system.

Figure 39 shows the Associated Stations tab for Speed Call Lists.

Figure 39
Speed Call List Properties (Associated Stations)



Assign Stations

To change feature key assignments for stations:

1 Select a list and choose **File - Properties**. The List Properties (General) dialog appears.

2 Choose the Associated Stations tab. Any stations displayed have the feature assigned.

3 Click **Add**. The Add Stations dialog appears.

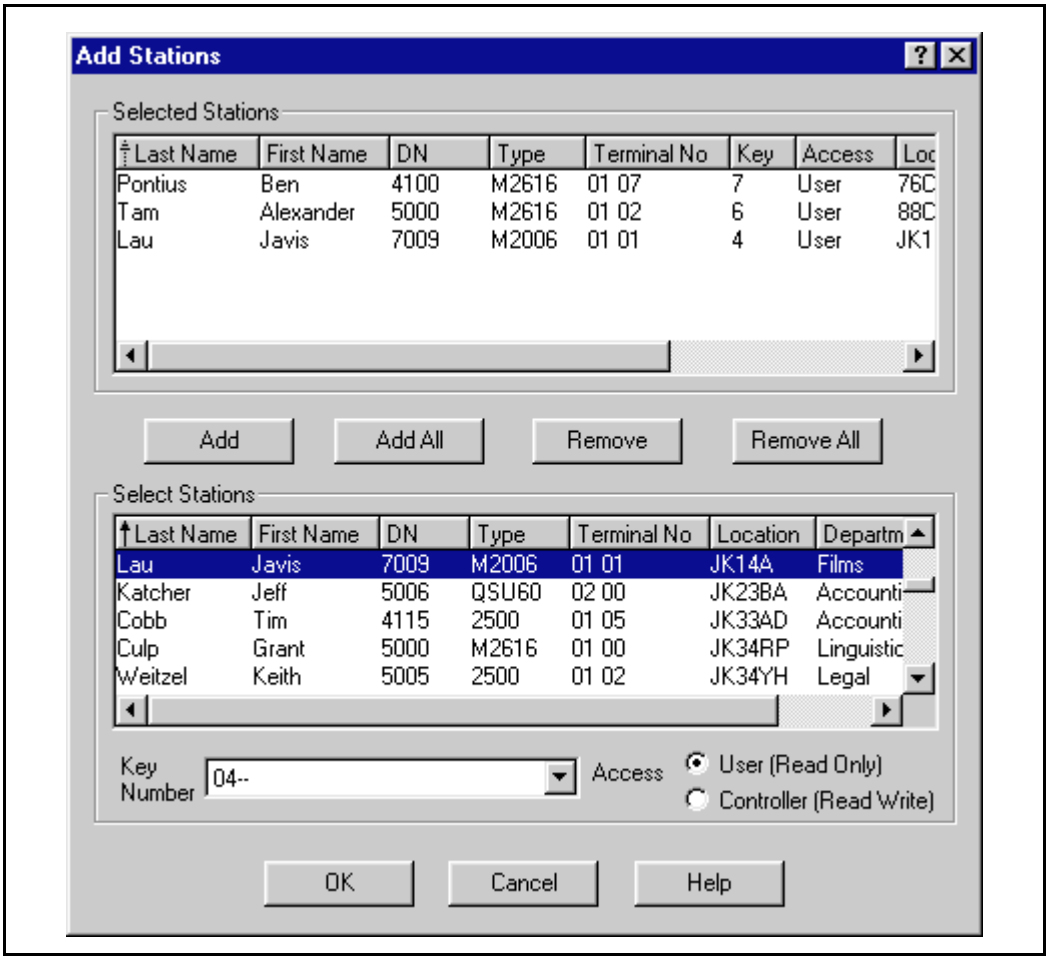
4 In the Select Stations list, select the station(s) and feature key(s) you want to assign the feature and its associated list.

Note: List Manager sets the feature key assignment in MAT's Station Administration module. Therefore, you must transmit the data from Station Administration for the feature key assignment to take effect.

5 Click **Add**. The selected stations are moved from the Select Stations list (bottom) to the Selected Stations list (top).

6 Click **OK**.

Figure 40
Add Stations dialog



Modify Feature Key Properties

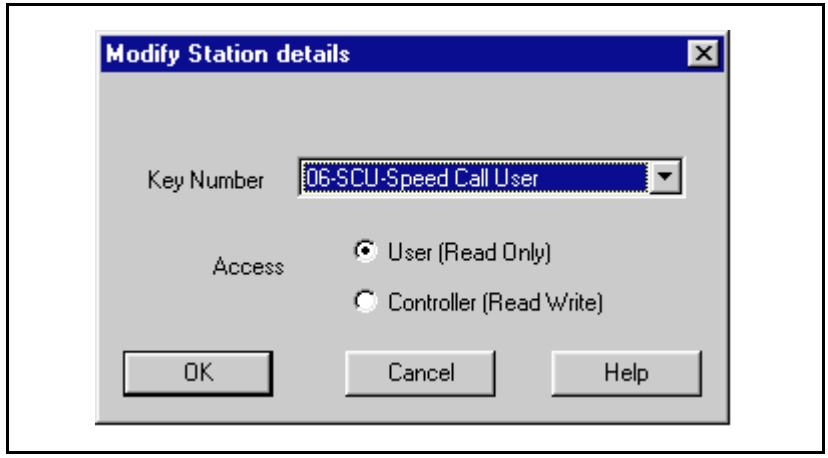
To change the feature key properties for a station:

1. Select a list and choose **File - Properties**. The List Properties (General) dialog appears.
2. Choose the Associated Stations tab. Any stations displayed have the feature assigned.
3. Select a station and click **Modify**. The Modify Station Details dialog appears.
4. Select a new key number, if desired. For Speed Call, select either User or Controller to change the access type, if desired.

   Note: List Manager sets the feature key assignment in MAT's Station Administration module. Therefore, you must transmit the data from Station Administration for the feature key assignment to take effect.

5. Click **OK**.

Figure 41
Modify Station dialog (Speed Call)



Remove Station Assignment

To remove the feature associated with this list from a station:

1. Select a list and choose **File - Properties**. The List Properties (General) dialog appears.
2. Choose the Associated Stations tab. Any stations displayed have the feature assigned.
3. Select a station or stations and click **Remove**.
4. Click **OK**.

Work with Pilot DNs

Pilot DNs provide access to Speed Call Lists. A Pilot DN can also activate Group Hunting.

Assign a Pilot DN

To assign a Pilot DN to a list:

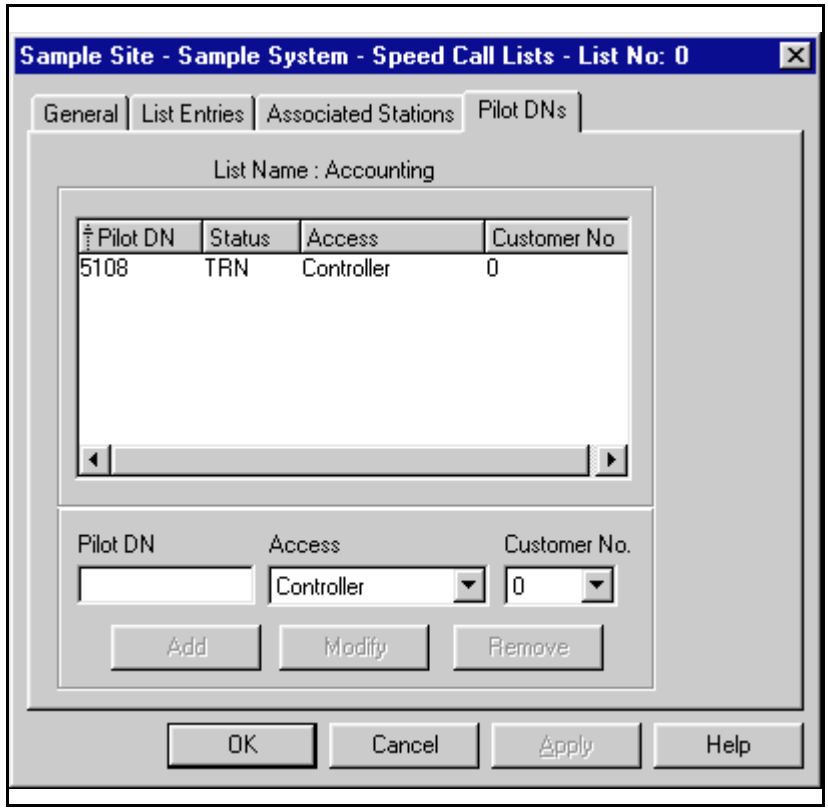
1. Select a Speed Call list and choose menu **File - Properties**. The property sheet for the selected list appears.
2. Click the Pilot DNs tab (Figure 42).
3. Use the buttons to Add, Modify, or remove Pilot DNs associated with this list.

   Note: Pilot DNs must conform to the customer Numbering Plan. To check the customer Numbering Plan:

   – In the Navigator, select the system and choose menu **File - Properties**.
   – Click the Customers tab.
   – Select the customer and click **Properties**.
   – Click the Numbering Plans tab.

4. Click **OK** or **Apply**.

Figure 42
Speed Call list properties (Pilot DNs)



Associate Pilot DN to a Group Hunt list

To associate a Pilot DN with a Group Hunt list:

1. Select a Group Hunt list and choose menu **File - Properties**. The property sheet for the selected list appears.
2. On the property sheet General tab, enter the pilot DN into the Pilot DN field.
3. Click **OK** or **Apply**.

Copy and Paste Lists

You can use the copy and paste commands to duplicate a list. Then you can modify the new list to make it unique. You can also paste the list into the List Manager window for a different system.

When you copy and paste a list, the synchronization status of the new list is set to **NEW**. The new list is added to the system during the next synchronization.

Duplicate a List

To duplicate a list:

1. Choose menu **View - Lists**.
2. Select a list and choose menu **Edit - Copy**.

   The list data is saved to the PC clipboard.
3. Choose menu **Edit - Paste**.

   CAUTION: A confirmation dialog asks if you want to overwrite the current list with the copied list. Normally, you do not want to overwrite the current list.

   3.1 Click **Change Properties** and give the pasted list a new list number.

   3.2 Make any other changes that are appropriate.

   3.3 Click **OK**.

Copy a List from One System to Another

To copy a list and paste it to another system:

1 Choose menu **View - Lists**.

2 Select one or more lists and choose menu **Edit - Copy**.

The list data is saved to the PC clipboard.

3 Open another system's List Manager application.

4 Choose menu **View - Lists**.

5 In the List Type view, select the appropriate list type.

6 Choose menu **Edit - Paste**.

CAUTION: If the list number of the list you copied is present on this system, a confirmation dialog asks if you want to overwrite the current list with the copied list. Normally, you do not want to overwrite the current list.

6.1 Click **Change Properties** and give the pasted list a new list number.

6.2 Make any other changes that are appropriate.

6.3 Click **OK**.

Set Global List Options

Use the Options dialog to set general parameters that apply to all lists of a specific type. To display the Options dialog, choose menu **Tools - Options**.

The Options dialog has separate tabs for Speed Call, Group Call, and Group Hunt lists. Some options apply only to lists of a specific type.

List Manager options apply when you create new lists. For a specific list, you can override most of these options. Click **Advanced Properties** on the property sheet (General) tab.

Default Options

Default options allow you to manage list allocation efficiently.

— List size—default number of entries created for a new list

— Network Class of Service (System Speed Call)—default Network Class of Service associated with entries in a new list

— DN size—Default maximum length of Directory Numbers associated with entries in a new list

— Originator Control over list (Group Call)—determines if the originator of the Group Call can terminate the call

— Max. length of queue (Group Hunt)—Default maximum number of calls that can be queued against the Pilot DN for new lists

— Call Forward All Calls (Group Hunt)—Check to allow Group Hunt to terminate at a station that has Call Forward All Calls allowed.

Memory Optimization

The following options help you manage system memory on the Meridian 1. These options allow you to restrict the amount of system memory required to support the lists.

— Maximum List Size—Maximum number of entries allowed in a new list.

— Memory Water Mark—Memory threshold. When the system memory used by lists is at or above the Memory Water Mark, the Auto Increase List Size checkbox is set to **Off**.

— Auto Increase List Size—When checked, lists are allowed to grow as new entries are added (until the Memory Water Mark is reached).

— Read Only Auto List Number—When checked, List Manager allows you to edit the automatically generated list numbers as you create new lists.

Available List Numbers

Options for Speed Call and Group Hunt lists include controls where you can set the available list ranges. These options let you restrict the total number of lists allowed for the system. Enter the starting list number and ending list number in the range.

Work with Reports

List Manager lets you view, manage, and generate reports using list data from systems configured in MAT. You can view each report on screen, print the report, or save the report to a file. Report layout and formatting is done through Microsoft Excel.

You can generate a report immediately. You can schedule report generation with specific dates, times, and intervals. Generated reports use the data extracted from the MAT database. These reports are automatically saved with a system default name to the default location unless you specify otherwise.

Each report format has the following attributes, as noted by the column headers.

- Report Name - names of available reports
- Type - notes if the report is either predefined or customized
- Number of systems - number of systems for which the report will be generated
- Number of Data Fields - number of data fields in the report
- Last Generated - date and time when the report was last generated

Each report shows a specific set of list data. List Manager provides a set of reports whose properties are predefined.

Reports and Text Files

All log report activity is performed, by default, in the current working directory for the System (the system subdirectory in your PC system). Other reports are sent to the PC directory of your choice. Here is a list of text files with the appropriate extension found in the working directory:

- Reports (*filename*.TXT)
- Communications logs (*filename*.LOG)

You need only supply the *filename* when prompted to save these files—MAT automatically supplies the appropriate extension.

Generate Reports

You can generate a report and display it immediately, send it to a printer, or save it to a file. You can schedule report generation to take place at predefined intervals.

To generate a report:

1. Choose menu **File - Reports**. The Reports window appears.
2. Select a report in the window display.
3. Click one of the following buttons:
   - **Print**—Print the report to the selected printer.
   - **Print Preview**—View the report on the MAT PC.
   - **Print Setup**—Select a printer to print reports.
   - **Schedule**—Display the Schedule window. Use this window to specify when and how often to generate the report.

To save a report to a file:

1. Choose menu **File - Reports**. The Reports window appears.
2. Select a report in the window display.
3. Check **Print to File**.
4. Click **Print**. The Export dialog appears.
5. Select a file format and destination type.
6. When the Choose Export File dialog appears, enter a file name (or use the default name) and select a directory to place the file.
7. Click **Save**. List Manager saves the report to the file name and location specified.

Predefined Reports

List Manager includes several predefined reports. These are listed below along with a short description of each report type. You cannot customize List Manager reports.

List Manager provides the following report forms:

Group Call

- Group Call lists—Group Call lists, sorted by list number
- Group Call lists by name—Group Call lists, sorted by list name
- Group Call lists with entries—Group Call lists including information about their entries.
- Group Call lists with associated DNs—Group Call lists including information about their associated DNs

Group Hunt

- Group Hunt lists—Group Hunt lists, sorted by list number
- Group Hunt lists by name—Group Hunt lists, sorted by list name
- Group Hunt lists with entries—Group Hunt lists including information about their entries

Options

- List Manager Options—List options for each list type

Speed Call

- Speed Call list by name—Speed Call lists, sorted by list name
- Speed Call lists—Speed Call lists, sorted by list number
- Speed Call lists by list type—Speed Call lists, sorted by list type (Speed Call or System Speed Call)
- Speed Call lists by SYNC status—Speed Call lists, sorted by synchronization status
- Speed Call lists with associated DNs—Speed Call lists including information about their associated DNs
- Speed Call lists with entries—Speed Call lists including information about their entries

Voice Mailbox

Overview

Voice Mailbox (VMB) data is similar to CPND in that it exists as a separate entity within MAT. However, it is associated with a Directory Number (which serves as a mailbox ID), and modifications to the VMB data can be made from any station which has an appearance of the mailbox DN. The station provides a means of access to data which is not a part of the station itself.

Voice mailbox differs from CPND in that it does not have a dedicated overlay. CPND information can be modified using overlay 95 as well as overlays 10 and 11 (MAT uses overlay 95). Voice mailbox information is only accessible from overlays 10 and 11.

VMB Data Considerations

VMB data is accessible from the Station Administration module (DN list dialog). VMB data is retrieved and transmitted with station data. There is no separate VMB communications task as there is for CPND.

When you delete a station which has one or more single appearance DNs with associated mailboxes, you are prompted to delete the mailbox(es) on the Meridian Mail system. This information is used to respond to a VMB prompt when the station is OUT'ed on the system.

VMB data can be modified at the Meridian 1 system through the Meridian Mail interface. MAT synchronization is a two step process, as follows:

1 The Meridian 1 database must be synchronized by uploading the information from Meridian Mail using overlay 48.

2 A station retrieval synchronizes the MAT database with the Meridian 1. See "Communicating with Meridian 1" on page 157.

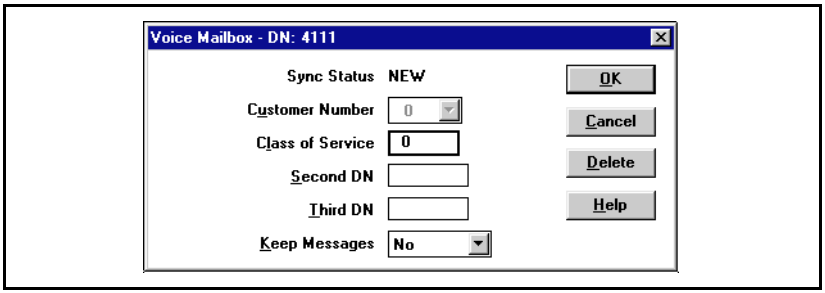
Administering VMB

VMB data administration in MAT is provided within Station Administration from the DN assignment function.

Adding/Changing Stations

When adding or changing stations, you can access VMB data by choosing the **VMB** button from the DN assignment dialog, similar to CPND. There is no **VMB** button in this dialog for systems without feature package 246. There is also no **VMB** button for multi-line stations when the key is not SCR, SCN, MCR, or MCN. Clicking the **VMB** button brings up the Voice Mailbox data entry dialog.

Figure 43
VMB data entry dialog



The title bar of this dialog shows the DN associated with the mailbox. If it is an existing mailbox, the data fields contain information from that mailbox record, including the following:

Synch Status: This is the synch status of the VMB record, which might be different from the synch status of the station.

Class of Service: Numeric entry field (0-127). This field is required when the mailbox is in **NEW** status, and there is no default value.

Second DN: DN entry field. Double clicking the box displays the DN list dialog.

Third DN: DN entry field. Double clicking the box displays the DN list dialog.

Keep Messages: Drop-down listbox containing **YES** and **NO** (**NO** is default). This field is only available when the VMB synch status is **NEW**.

The VMB synch status indicates which operation is required at the VMB prompt in overlay 10 or 11.

- **NEW**: VMB does not exist on Meridian 1 and will be added at upload time.
- **CHG**: VMB exists on Meridian 1 and will be changed.
- **OUT**: VMB exists on Meridian 1 and will be removed.
- **TRN**: VMB exists on Meridian 1 and no update is required.

Use the **Remove** button to change the VMB synch status to **OUT**. This operation is confirmed with a message box. When a VMB is in **OUT** status, no further updates are allowed (except for **UNDO**).

If a VMB is modified or added from an existing station, that station's synch status becomes **CHG** in order to allow the VMB update to occur as part of a station update.

Deleting Stations

When you remove a station that has a single appearance DN with an associated mailbox, you are prompted to determine if the mailbox should be deleted on Meridian Mail as well. In order to respond to this prompt, MAT also prompts you for this information when you delete stations. However, to avoid possible synchronization problems, a different method is used.

When you delete stations in MAT, the delete confirmation dialog is displayed. On systems with VMB, this dialog contains a Delete VMB checkbox that defaults to checked (**YES**).

Your **YES** or **NO** response is used to continue or cancel the deletion. The delete VMB information is stored as part of the delete transaction, so that it applies to all affected stations. MAT uses this information to respond to any DELETE_VMB prompts presented during transmission of the deleted stations.

The implications of this approach are as follows:

- You are prompted for this information even if none of the stations being deleted has a single appearance DN. In this case, the information is never used.
- If you wish to delete two stations but give different responses to DELETE_VMB for those stations, two separate **Edit - Delete** operations are required.

This guarantees that the correct information is stored in the station that will actually get the DELETE_VMB prompt. In cases where all occurrences of a multiple appearance DN are deleted within the MAT database, only the last station transmitted will receive the DELETE_VMB prompt. Since it is not possible to know which station will be transmitted last in all situations, the DELETE_VMB information must be stored with all the stations.

This procedure prevents accidental deletion of mailboxes when the MAT and Meridian 1 databases are not completely synchronized. Since MAT prompts you on any deletion (even if no single appearance DN's are involved), the DELETE_VMB information is available if the Meridian 1 prompts for it unexpectedly. For example: The MAT database has two appearances of a DN, but the Meridian 1 database has only one (due to a change done in overlay 10 or 11).

Changing DNs

When you change a DN on a station, its associated mailbox must be removed from the VMB file if the DN prior to the change was single appearance. You should delete the VMB record when you commit to the station update by clicking **OK** on the Station dialog. In order to warn you when a mailbox record is to be deleted, a confirmation dialog appears.

The confirmation dialog appears when a station change will result in one or more mailboxes being deleted. If you choose to cancel at this point, the entire station update is canceled. If you choose to continue with the operation, the mailbox can be restored later by performing an undo of the station update.

Because a single mailbox can be updated from multiple stations and those stations can be transmitted to the Meridian 1 system in any order, there are some synchronization issues which can not be resolved by MAT. Some of these issues are described in the examples below.

All of the following examples involve two transactions, which, by default, are transmitted on a first-come-first-served basis. The ambiguities described below only occur if you schedule the second transaction to be transmitted before the first.

VMB Data Synchronization

Consider the following examples when scheduling synchronizing station data associated with Voice Mailbox data:

Example 1—Deleting Stations

Station A and Station B have the only two appearances of DN 2000, which has an associated voice mailbox.

1 Delete station A and respond **YES** to the Delete VMB dialog.

2 Delete station B and respond **NO** to the Delete VMB dialog.

If station A is scheduled before station B, the mailbox is deleted on Meridian Mail. If station B is scheduled first, the mailbox will not be deleted.

Example 2—Adding a Mailbox

Station A has single appearance of DN 2000, which has an associated voice mailbox in TRN status.

1 Change DN on station A to 2001 (this deletes the VMB record for 2000).

2 Add station B with DN 2000 and create a new voice mailbox for it.

If station B is scheduled before station A, the transmit will fail when it attempts to create a new mailbox for DN 2000. It will exist on the system until station A is transmitted.

Example 3—Changing a DN

Station A and station B both have an appearance of DN 2000, which has an associated voice mailbox. Station B is in **TRN** status.

1 Update the mailbox via station A.

2 Before transmitting station A, change DN 2000 to 2001 on station A.

When station A is transmitted, the updates to the voice mailbox are not made, because station A no longer has an appearance of DN 2000.

Global Update

Overview

The Global Update function is available in both the Station Administration and the CPND Administration modules. It lets you change common data values in each of selected items in the main application window (Station list or CPND list) either directly or through a confirmation option.

The Global Update procedure involves the following steps:

1 Select those list items that you wish to update. You can use the **Select** feature to select stations based on specific criteria.

2 Select a field for update.

3 Define the update or updates to perform on a selected field in the selected items.

4 Execute the change.

You can perform the update on all selected items directly, or you can do it through a confirmation option on an item-by-item basis.

If you are running in Installation mode, you are prompted to set up communication with Meridian 1 whenever you modify a data record. You can synchronize the data now, schedule a time for synchronization, or cancel the prompt and schedule synchronization later. See “Communicating with Meridian 1” on page 157

Selecting Data Items

In a data list window of Station Administration or CPND Administration, select the items you wish to update. You can change the current selection as follows:

1 Click to select a single item.

2 Use the space bar to turn off all selections and select only the first station in the list. This method of selection turns off all other selections, leaving only the single current selection.

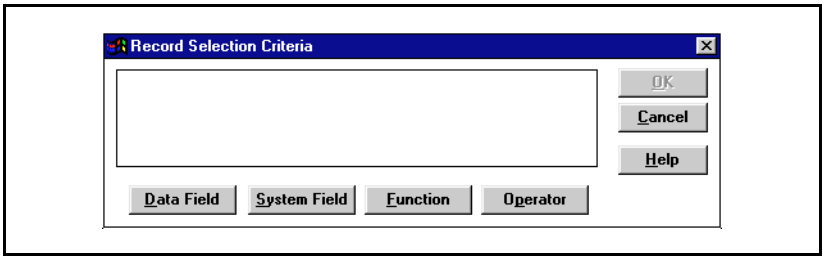
3 To select multiple stations, hold down the <Shift> key and click a station, or press the space bar, to toggle the selection status of that station without affecting other selections. If you hold down the <Shift> key you can use the up and down arrow keys to add the next adjacent item to the highlighted list.

Choose **Edit - Select All** to select all items, or you can define criteria to select a group of stations using **Edit - Select**.

Define Selection Criteria

To define criteria for record selection, choose **Edit - Select** in the Station view of the Station Administration window or in the CPND Administration window. This displays a Record Selection Criteria dialog in which you enter the expression defining the selection criteria.

Figure 44
Record Selection Criteria dialog



An expression is a formula that follows standard mathematical conventions regarding the use of brackets ({}) and the order of operations (add, subtract, multiply, or divide). Operations can act on numeric data or on field values from the MAT database. Field names must be exactly as defined in the MAT database. You can enter the desired expression by typing it in the text box directly, or by using the selection criteria and operation buttons provided.

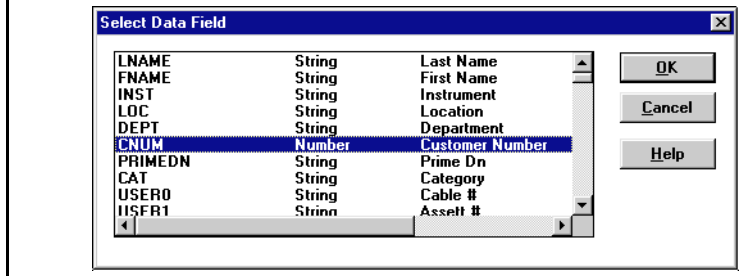
The dialog has buttons that allow you to select fields, operators, and functions to build a valid expression. You may have to modify the position of brackets when completing the expression.

When you have finished creating a valid expression, click **OK** to display the Station Administration window. Those items which fit the criteria are highlighted. You can still modify this selection as described in “Selecting Data Items” on page 144.

Select Data Field

When you choose **Data Field**, a list of available fields is displayed in a Select Data Field dialog.

Figure 45
Select Data Field dialog



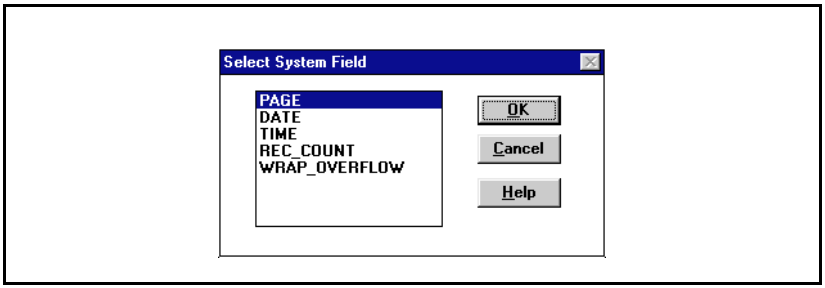
Select the desired station or CPND field name and click **OK** to paste the field into the Select Criteria expression text box at the current cursor position. You can type a letter to scroll the listing to the next item starting with that letter.

Select System Field

When you choose System Field, a list of available fields is displayed in a Select System Field dialog.

Select the desired field name and click **OK** to paste the selected field name into the Select Criteria expression text box at the current cursor position.

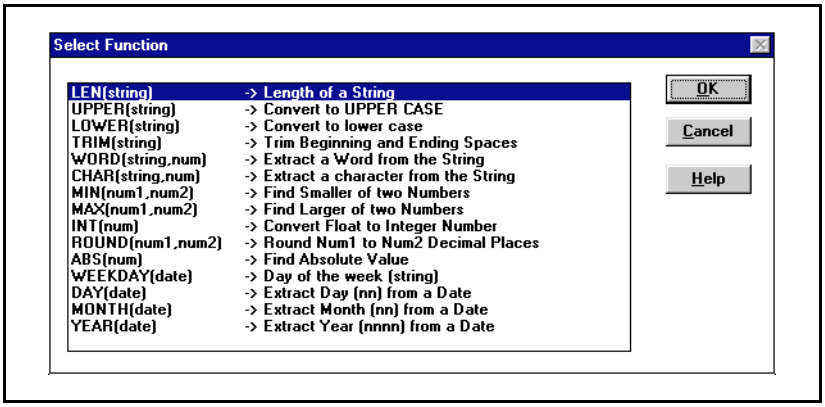
Figure 46
Select System Field dialog



Select Function

A function can generate a value on its own, or it may act on the field directly after it in the expression to produce a value that depends on that field value. When you choose **Function**, a list of available functions is displayed in a Select Function dialog.

Figure 47
Select Function dialog

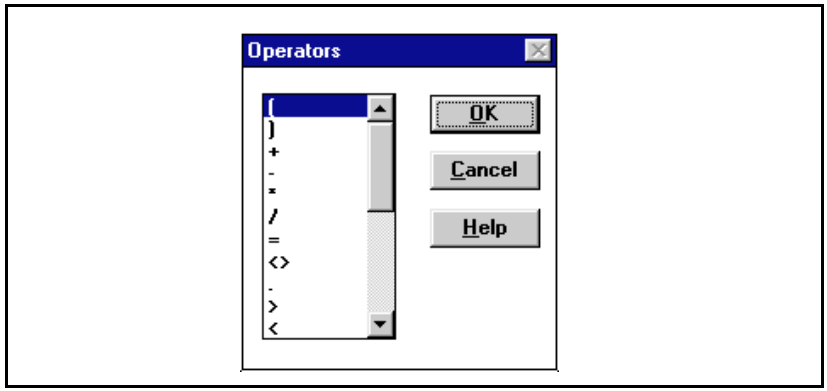


Select the desired field name and click **OK** to paste the selected function name into the Select Criteria expression text box at the current cursor position.

Select Operator

An operator causes a mathematical combination of field values (arithmetic, Boolean, conditional, and so on). When you choose **Operator**, a list of available operators is displayed in an Operators dialog.

Figure 48
Operators dialog



Select the desired operator and click **OK** to paste it into the Select Criteria expression text box at the current cursor position.

Selecting the Items for Change

When you have completed the selection criteria expression, click **OK** to return to the Administration list window. All items that meet the defined criteria are highlighted.

Example Expressions

Below are examples of selection expressions to help you understand the Select feature.

Example 1

Select all stations that have been changed in the MAT database since the last transmission to the switch.

The SYNCH field shows synchronization for the sets in relation to the Meridian 1 database. If the synch status of the set is **TRN** (for transmitted) then all changes have been transmitted to the switch and the data is synchronized with the switch. Any other status (**NEW, OUT, CHG, RPL**) identifies a set that has been changed on MAT and needs to be transmitted to the switch (see the Sync Status section for details.)

In order to select all stations that need to be transmitted, you can either select all stations in **NEW, OUT, CHG** or **RPL** status or you can simply select all sets that are not in **TRN** status. The selection will be the same in either case. For this example, we'll choose all sets that are not in **TRN** status:

1 Choose **Edit - Select.**

2 From the Data Field list choose **SSTAT.**

3 Click <> (not equal to) from the Operator list (or simply type in <>).

4 Type in **"TRN"** (Note: all strings must be enclosed in quotes. Column 2 in the Data Field List identifies the field as either a string or numeric).

The complete command in the Record Selection Criteria edit box is as follows:

STATION->SSTAT<>"TRN"

Note that instead of following steps 2-4 you can simply type in the expression above.

5 Click **OK**.

All stations will be selected except those in **TRN** status.

Example 2

Select all stations with a prime DN between 4000 and 5000.

To select all stations within this range, select all sets with PRIMEDN>4000 and PRIMEDN<5000. MAT will allow you to do this by following these steps:

1 Choose **Edit - Select**.

2 Select **PRIMEDN** from the Data Field list.

3 Select > from the Operator list (or simply type in >).

4 Type in **"4000"**.

5 From the Operator list select **.AND.**

6 Select **PRIMEDN** from the Data Field list.

7 Select < from the Operator list (or simply type in <).

8 Type in **"5000**".

The complete command is as follows:

STATION->PRIMEDN>"4000".AND.STATION->PRIMEDN<"5000"

9 Click **OK**.

All stations that have a prime DN between 4000 and 5000 will be selected.

Example 3

Select all M2616 sets with class of service CFXA.

1 Choose **Edit - Select.**

2 Select **INST** from the Data Field list.

3 Select = from the Operator list (or simply type it in).

4 Type **"M2616"** (criteria is case sensitive; make sure you use a capital M).

5 Select **.AND.** from the Operator list.

6 Select **CFXA** from the Data Field List (the mnemonic CFXA represents Call Forward which can be either allowed "CFXA" or denied "CFD").

7 Type in **"= CFXA".**

8 Click **OK.**

All M2616 type stations with Call Forward External Allowed (CFXA) will be selected.

Specify the Change

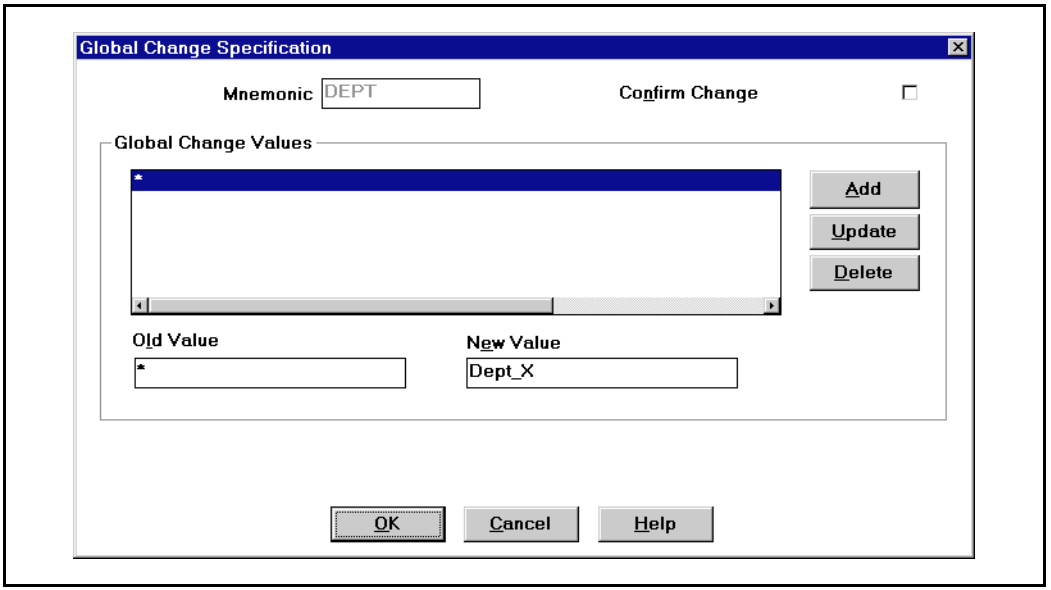
You can perform a global update on a single field in each item selected in the list window. Once you have selected the desired items for update, you select the field to change.

Select the Field to Change

When you choose **Edit - Global Update**, the Select Data Field dialog list appears. The fields listed include only those that can be changed globally. For example, the Instrument (INST) field is not included in this list because some of the fields and their values in the record depend on the instrument.

When you have selected the field to change, click **OK** to display the Global Change Specification dialog. The selected field name is displayed in the Mnemonic box. The example below shows the entries required to change all selected station departments to “Dept_X”.

Figure 49
Global Change Specification dialog



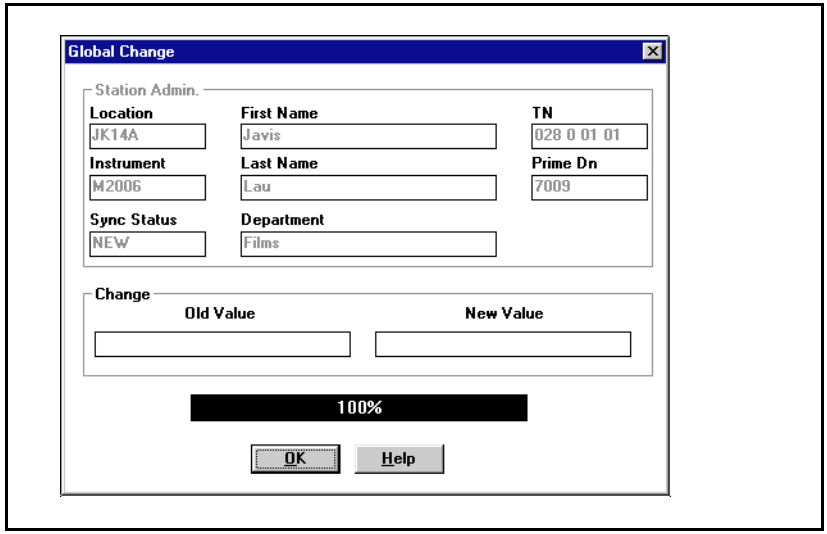
The Global Change Values edit list box lets you set up the changes in the field values of the field indicated by the Mnemonic box. The list box contains a list of changes that you define by entering values in the Old Value and New Value fields.

> ***Note:*** The Old and New Value text boxes are case-sensitive. The values must be entered in the same case as is used in the MAT database. For example, “**Dept._ B**” and “**Dept._b**” are not the same values.

Perform the Global Change

When you click **OK** in the Global Change Specification dialog, the Global Change dialog appears. This dialog is a status dialog only (you cannot edit any of the fields).

Figure 50
Global Change dialog



The dialog contains a Station Definition area to identify the station currently being changed. The Change area displays the Old and New Values.

If you are not using change confirmation, a “percentage done” bar informs you of the progress of the changes.

While the change is in progress, the dialog displays the **Cancel** and **Help** buttons. **Help** displays help for this dialog and **Cancel** halts the change task.

WARNING

If you click **Cancel**, there is no way of controlling which records are changed and which are not.

When the task is complete, the **Cancel** button is replaced by an **OK** button.

Change Confirmation

If you elected to confirm changes, a Confirmation dialog asks you whether to "Change this record?", for each station record in turn. The Global Change dialog contains Station identification and Change identification data for the current field.

You can move this dialog in the same way as other Windows dialogs in order to see the progress bar and function buttons in the Global Change box.

The Confirmation dialog displays the following buttons:

- **Change:** Perform the change indicated in the Global Change data box and proceed to the next station.
- **Skip:** Proceed to the next station without changing the current one.
- **Change All:** Proceed with all remaining changes without confirmation.
- **Cancel:** Cancel all remaining changes.

During the change process, the progress bar changes and the Global Change data area is updated.

Change Completion

When the Global Change task is complete, the Confirmation box is cleared, the Global Change box indicates 100% completion, and the **Cancel** button is replaced by an **OK** button.

Click **OK** in the Global Change dialog to return to the list window.

Global Update—Wildcards, Matching, and Allowed Fields

If you choose **Edit - Global Update**, you build a list of changes for a single field on the selected records. The list of changes is built by adding requests to change Old Value to New Value for the chosen field. To improve efficiency and to shorten the list of changes, you can use ***** (asterisk), the wildcard character. The wildcard matches any value in the field.

Wildcard matches that you specify are always done after the other Old Value matches have failed. Otherwise, matches are attempted in order. For each selected record, the first change request that matches the Old Value is implemented.

Key* allows you to update a feature when the key on which the feature resides is unknown. For example, suppose you wish to update the Conference key on all sets to No Hold Conference/Autodial. The Conference key may exist on any key of the selected station(s). **Key*** allows you to update the key feature without knowing the key number. MAT searches for the first occurrence of the feature specified, and updates that key per the instructions. See “Global Update—Examples” on page 153 for more detail.

Certain fields on the station may not be changed with the Global update facility:

- Location must be unique for each station, so Global update is not permitted.
- Station type may not be changed with global update.
- Certain administrative features of a station, including color and type cannot be changed.

Global Update—Examples

A few examples are provided below to help you use the Select and Global Update features. These examples provide the basic steps for selecting stations based on certain criteria and updating common fields. These methods can be applied to a variety of Global Update situations.

Example 1

Suppose you wish to change all DNs in the range 4000-4999 to a 5 digit 54000-54999. You wish to apply this change to all stations for Customer 1.

1 Global Update is applied to selected stations only. You should therefore select all stations for Customer 1. **Choose Edit - Select**. Click on Data Field and choose the Customer Number field to build the expression **STATION->CNUM = 1**. (The **STATION->CNUM** portion is provided automatically when you select Customer Number from the list of Data Fields).

If there is only one customer on the Meridian 1 system, use **Edit - Select All** to select all the stations for this DN change.

2 Choose **Edit - Global Update** to specify the DN change.

- Specify the field to be changed in the Select Data Field dialog. MAT provides a special field called All Directory Numbers. You can move the highlight in the Select Data Field dialog until the All Directory Numbers field is highlighted. Click on OK to select the All Directory Number field.
- In the Global Change Specification, you are asked to build a list of each old value and the new value with which to replace it. The Mnemonic field shows that we are working with the field All Directory Numbers (ADN).

  Enter the DN range 4000-4999 in the Old Value box. Move to the New Value box and enter 54000-54999. To enable this change, click **Add**. The requested change appears in the Global Change Values box. (You can Update or Delete each entry in the Global Values box by clicking the appropriate button.)

  When you are satisfied with this change request, click **OK**.
- MAT examines each station to see if any changes need to be made. A meter marks MAT's progress through the stations. Click **Cancel** to halt the updating process.

  For any applicable station, the Global Change dialog displays identifying information for the station and the old and new values that are to be modified.

Example 2

Suppose you wish to change all Conference keys (A03) on all stations to No Hold Conference/Autodial keys (CA). Conference may currently be configured on any key on the selected stations.

1 Select the stations to be updated. Since all stations need to be changed, choose **Edit - Select All**.

2 Choose **Edit - Global Update** to specify the desired change. Choose **Key** from the Select Data Field window. (You can move immediately to the Key mnemonic by typing in the first letter of the mnemonic, **K**.) The Global Update window appears. A list box allows you to specify which key to change. Since you are not sure which key on each station is equipped with Conference, use **KEY***, the default for this list, to update the feature regardless of the key number.

3 Enter the existing value of the key to be changed in the Old Value box, **A03** and **TAB**. (If the key you wish to change has parameters, tabbing brings up the parameter fields.) Conference does not have parameters, so tab moves you to the New Value box. Enter the mnemonic of the new feature (in this case, **CA** for No Hold Conference Autodial). Press **<Tab>** to display edit boxes for the parameters associated with the new feature. Enter the appropriate data in the parameter fields.

4 You can choose to confirm each change. Once you click **OK**, MAT begins the updates. MAT searches each selected station for the first occurrence of A03. If A03 is encountered, MAT changes the key to the new value: CA. Note that if the station contains multiple Conference keys, only the first will be changed. You can run a second global update to change the second appearance of a feature.

Example 3

Suppose you wish to add a feature to the first blank key on each set, but the first blank key may be a different key number on each set.

The choice of **Key*** for your Global Update criteria will tell MAT to look for the first occurrence of a particular feature on each set selected. When MAT encounters that specified feature it will change that first occurrence to the specified new feature and then proceed to the next set. In this example, the feature we are looking for is a blank feature. Perform the following steps:

1 Select all the stations you wish to change.

2 Select **Edit - Global Update**.

3 Choose **KEYGUPD** (Key Global Update) from the criteria list.

4 Choose the key number **KEY*** (this is the default).

5 Enter nothing (blank) in the Old Value, enter the new feature mnemonic and appropriate parameters in the new value. Select **Add** to add to the Global Update list.

6 Click **OK.** All stations selected will have the new feature added to the first blank key. If a selected set does not have any blank keys, the feature will not be added to that particular set.

Communicating with Meridian 1

Overview

A Meridian 1 system can be programmed with relevant station data, list data, and CPND data from the MAT application. The MAT application can also retrieve data from a Meridian 1 system. For example, you can create a MAT database for a system and then upload relevant data to program a Meridian 1. You can make modifications within MAT and upload these to the system. At any time, you can download system data to MAT for record-keeping or verification purposes. If you have a Meridian 1 system and wish to start using MAT to administer the data, you would download the data from the system and update the data in MAT to include all MAT administrative and record-keeping data.

Your PC uses a modem to communicate, through normal telephone wires, with a modem in the Meridian 1. MAT Release 5.0 and higher can also use an Ethernet connection if it is available on the Meridian 1. The communications protocols must be predefined for each system. From the MAT Navigator window, select the desired system. Choose **File - Properties** to display the System Properties window. Select the Communications tab to define the appropriate communications protocols for this system.

Station Administration, CPND, and List Manager use the **Synchronize** menu to schedule communications with the system.

Communications Considerations

Retrieving data is a two-stage process. The Meridian 1 data is first downloaded and stored in the current working directory (the MAT system subdirectory). Parsing converts the data into the MAT data format. This new data overwrites (synchronizes) the MAT database for the system with the data from the Meridian 1. The Meridian 1 data can be parsed at any time after retrieval.

MAT requests a customer number for all data retrievals in order to enforce the Meridian 1 Limited Access to Overlays (LAPW) restrictions. If the login password associated with the entered customer number is restricted from the print routines needed for synchronization, the data will not be retrieved.

Station Synchronization vs. List Synchronization

List Manager synchronization is a separate task from Station synchronization. Synchronize list data before synchronizing station data.

Some List Manager settings make changes in MAT's Station Administration module (for example, feature key assignment). You must ensure the list data is present on the system so that station validation does not fail.

Station Retrieval—TTY Port Configuration

During the synchronization retrieval operation, MAT requests a print of the information on the Meridian 1 through the SDI port. The port used for Mat data retrieval should be configured only as a Service Change port. The MAT System Terminal application can be used to access Overlay 17 to temporarily configure the TTY port as SCH only (not required for Ethernet connections). If the port is configured for other data such as Traffic or Maintenance messages, MAT will attempt to distinguish this data from relevant station data. The retrieval log will give errors when data is not recognized as station data.

Data Retrieval—Log Window

During data retrieval, the amount of activity in other Windows tasks should be limited.

During long data retrievals, or if there is enough activity in other Windows processes, the capacity of the communications buffer can be exceeded. This condition will terminate the retrieval process to prevent erroneous data from being entered into the MAT database.

To prevent this occurrence, the Log Window will automatically minimize itself. The icon will be labeled “Log Window:” and will contain the current site and system names. You should wait momentarily and restore the Log Window to check the progress of the retrieval.

The Log Window remains on the screen longer if you resize it to contain fewer lines. The amount of window resizing and moving during data retrieval should be limited, since these activities will prevent the retrieval activity from processing incoming characters.

If the capacity of the communications buffer is exceeded during the retrieval, necessary data is being lost. The MAT software displays a message and terminates if the buffer is exceeded. In this case, stations are not added to the MAT PC database. The message is printed to the log file, warning that the data has been lost.

Repeat the retrieval to add the new data. It is possible to retrieve a portion of the stations on the Meridian 1 by choosing **Synchronize - Retrieve - Specify**.

The Communications Task

Synchronization is a task that ensures that the MAT database reflects the data on the Meridian 1 system. The task can be achieved in two ways:

- Retrieve Meridian 1 data to the MAT database (download).
- Transmit MAT data to Meridian 1 (upload).

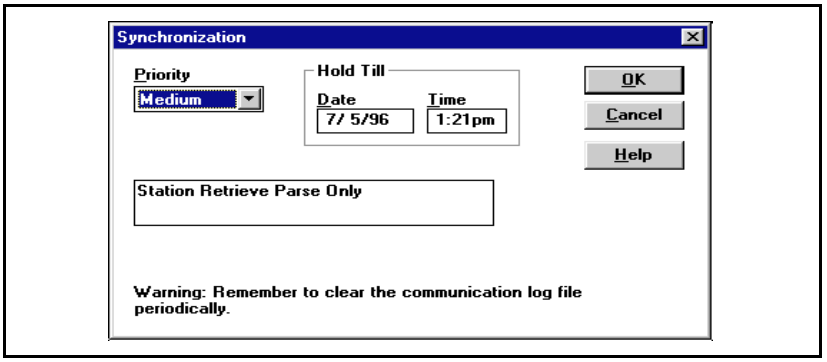
  Note: It is recommended that you turn off all TTY messages (including bug messages) during download or upload.

Whenever you require access to a Meridian 1 that is defined as a system for MAT, use the **Synchronize** menu of the MAT module you are currently using (StationAdministration, CPND, or List Manager). You can use this menu to schedule upload or download of selected data, or you can define criteria to download or upload specific data. Whenever you modify the MAT database, you are prompted to set up a transmit task to upload the new or modified data to the Meridian 1.

Synchronization

Whenever a communication task has been defined, you are prompted in a Synchronize dialog box to set up a schedule for the task.

Figure 51
Synchronization dialog



The following data can be entered to schedule a task:

Priority

The Priority drop-down list box contains the numbers 1 through 10, representing the priority level for the task. The number 1 represents High, 6 represents Medium and 10 represents Low. The default is Medium. Change the priority by selecting an item, or enter the number in the text box.

The Priority number determines where, in the current communications task queue, this task is placed.

Hold Till

Hold Till is made of two text box fields that determine when this task is sent to the communications queue.

Date

The date for the task in the format *MM*/*DD*/*YY*, where *MM* is the two digit month in the range 01-12, *DD* is the two digit day in the range 01-31, and *YY* is the two-digit year. The default entry is the current date (leading zeroes are dropped when the input is validated).

Time

The time for the task in the format *HH*:*MMXX*, where *HH* is the two-digit hour in the range 01-12, *MM* is the two-digit minutes in the range 00-59 and *XX* is AM or PM representing before or after 12:00 noon. The default entry is the current time.

Description

Station Update - Station Transmit

CPND Name Update - CPND Name transmit

CPND Update - Configuration transmit

Change as replace

This field is only available if MAT is in Maintenance mode. See "Station Administration" on page 31.

If you accept the default entries, the task is scheduled immediately.

Click **OK** to send the task to the Scheduler module of the MAT application. If the task is not immediate, the Scheduler runs iconized on the desktop. The Scheduler must be running at the scheduled time for the task to be sent to the communications task queue.

You are not required to schedule a task at any particular time. You can click **Cancel** in this dialog and use the **Synchronize** menu at any time to schedule a task.

Download

This task updates the MAT database with selected data from the Meridian 1. You can select data items in the current list window (Station or CPND) or you can define criteria for system data to be retrieved.

When you choose **Synchronize - Retrieve**, a submenu allows you to select criteria for downloading selected station data. The submenu contains the following items:

All: All data for stations or CPND in the system

Selected: Only items selected in the current list of CPND or stations

Since: Only stations on the system that have changed since a specified date (not applicable to CPND)

Specify: Define criteria for stations or CPND data on the system for download

Parse Only: Parse previously retrieved data

Log: View or clear a log of communications activity

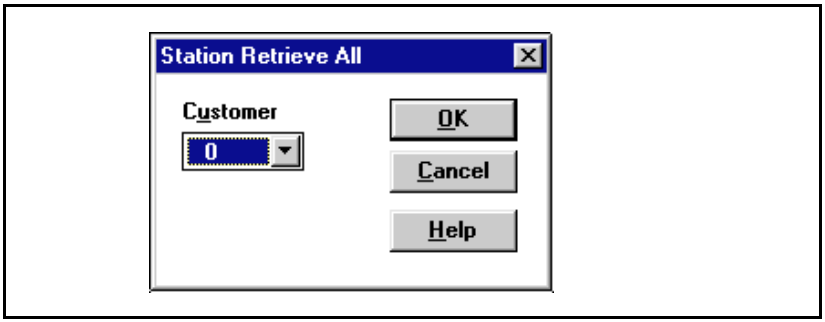
Retrieving All Data

You can set up communications with the system to retrieve all data (station or CPND) that pertains to a single customer in the Meridian 1 system.

Station Retrieve All

Choose **Synchronize - Retrieve - All** of the Station Administration module to display the Station Retrieve All dialog.

Figure 52
Station Retrieve All dialog



The dialog contains the following data entry field:

Customer

A single-line drop-down text box with a list of the customer numbers defined for the open system. The text box contains the currently selected item.

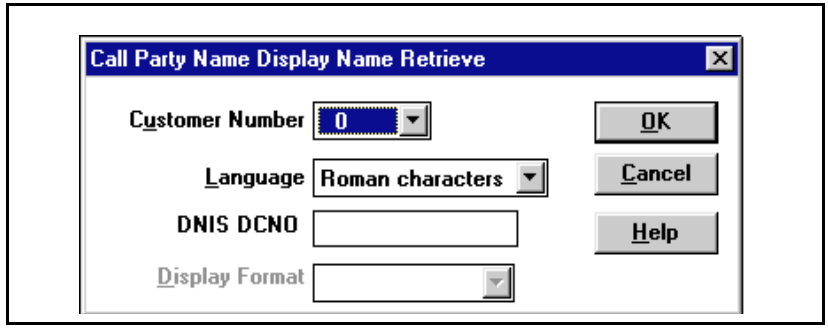
When you click **OK**, you are prompted to set up the communications task.

Note: During station retrieval, the hardware list is updated with cards that support the type of stations being configured in MAT. These might not be the exact type of hardware cards actually installed in the Meridian 1. However, they will be cards with equivalent function as the installed cards.

CPND Name Retrieve All

Choose **Synchronize - Retrieve - All** from the CPND Name view to display the CPND Retrieve dialog.

Figure 53
CPND Name Retrieve dialog



The CPND Retrieve dialog contains the following data entry fields:

Customer Number: A single-line drop-down text box with a list of the customer numbers defined for the open system. The text box contains the currently selected item.

Language: A single-line drop-down text box with a list of languages defined for the open system. The text box contains the currently selected item.

DNIS IDC: A text box in which you can enter the DNIS IDC for this group of CPND entries.

Display Format: A single-line drop-down text box with a list of the CPND name display formats defined for the open system. The text box contains the currently selected item.

When you click **OK**, you are prompted to set up the communications task.

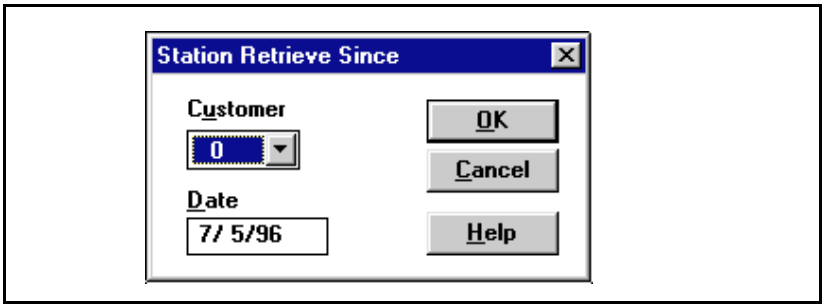
Selecting Data to Retrieve

You can select items in the Station list or CPND list window that you want to download from the Meridian 1. See “Global Update” on page 143. Meridian 1 data overwrites the data currently stored in the MAT database for the selected items. When you choose **Synchronize - Retrieve - Selected**, you are prompted to set up the communications task.

Retrieve Since Option

In the Station Administration module, choose **Synchronize - Retrieve - Since** to display the Retrieve Since dialog.

Figure 54
Station Retrieve Since dialog



The dialog contains a single field:

Date: This text box contains the date in the format *MM*/*DD*/*YY*, where *MM* is the two digit month in the range 01-12, *DD* is the two digit day in the range 01-31, and *YY* is the two-digit year.

When you click **OK**, you are prompted to set up the communications task. The task retrieves all data that has changed since the specified date.

Note: During the Synchronization Retrieval operation, MAT requests a print of the information on the system through the SDI port. MAT attempts to distinguish relevant data from other messages that might also be passed through the same port. Examples include traffic and maintenance messages. You might find that it helps the accuracy of the MAT retrieval process to temporarily disable other uses of this port.

Specifying Data to Retrieve

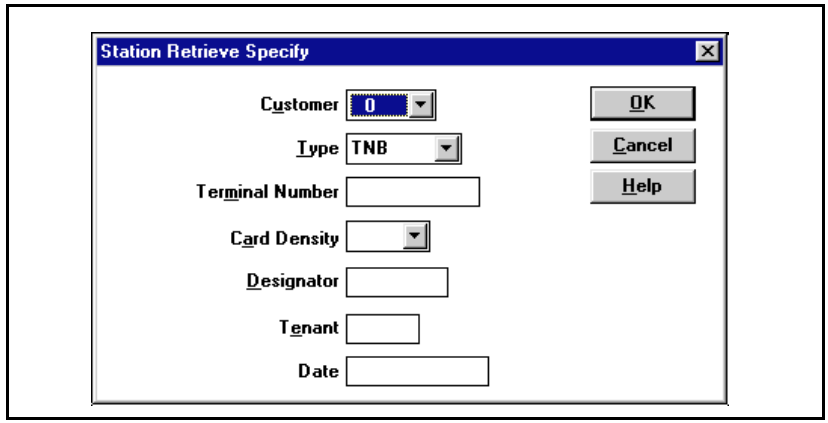
Advanced users can specify stations or CPND (Name or Administration) or Reserved Unit Type (RUT) data with a one-to-one correspondence of data in certain fields for retrieval.

Note: When you retrieve Station Data, CPND names are also retrieved, and the Station View is updated accordingly.

Station Retrieve Specify

Choose **Synchronize - Retrieve - Specify** option in the Station module to display the Station Retrieve Specify dialog. Enter the data pertinent to those stations on the system that you wish to download. By default, all fields in the dialog are blank. All stations are downloaded if no data is specified.

Figure 55
Station Retrieve Specify dialog



Criteria you can set for station selection include:

Customer

A single-line drop-down text box with a list of the customer numbers defined for the open system. The text box contains the currently selected item.

Type

A single-line drop-down text box with a list of the instrument types (telephones) available for the open system. The text box contains the currently selected item.

Note: Station Retrieval—Using Type = 2000

You can use this Meridian 1 feature to retrieve all 2000 type sets from the Meridian 1 system. In the **Retrieve Specify dialog**, move to the **Type** box. You can type **2000**, although it does not appear in the list box. MAT will correctly respond to the Type prompt during retrieval.

Terminal Number

Enter a TN or partial TN to retrieve only those stations attached to the part of the Terminal Number entered.

Card Density

This single-line text box allows you to enter the card type. The card type value is associated with the terminal number.

Designator

Enter a designator value in this field to retrieve all stations with this Designator.

Tenant

Enter a Tenant value in this field to retrieve all of that Tenant's stations.

Date

This field accepts a date in the format *MM*/*DD*/*YY*, where *MM* is the month in the range 01-12, *DD* is the day in the range 01-31, and *YY* is the two-digit year. This retrieves all stations modified after the specified date.

Note 1: If you request a retrieval from a large Meridian 1 system, using Specify and the Type, it could spend a long time selecting the appropriate stations. If the time-out period (set in system properties) is not long enough, MAT will determine that no more information is being sent by the Meridian 1 and halt the retrieval.

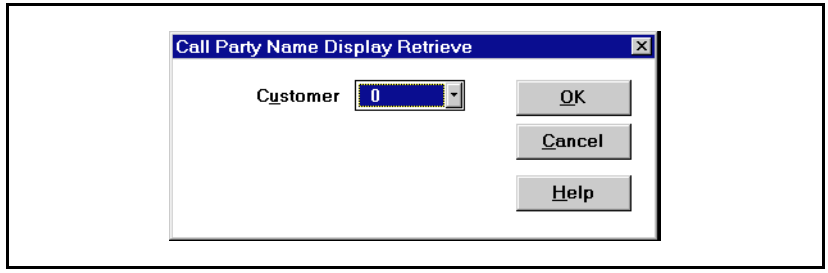
The number of stations retrieved is stated in the Retrieval Log. The time-out parameter can be lengthened to give the Meridian 1 sufficient time to find the appropriate stations to transmit. However, a long time-out period also lengthens the time required by MAT to correctly identify that the Meridian 1 has no more information to send. You need to be patient if you extend the time out period beyond the default values.

Note 2: MAT is able to retrieve selected stations from a Meridian 1 Option 11. You can also retrieve all stations on an Option 11, or choose **Synchronize - Retrieve - Specify**, using a partial TN.

CPND Administration Retrieve Specify

You can retrieve customer-specific CPND Administration data from the Meridian 1. Choose **Retrieve - Specify** in the CPND Administration view window to display the CPND Retrieve Specify dialog.

Figure 56
CPND Retrieve dialog



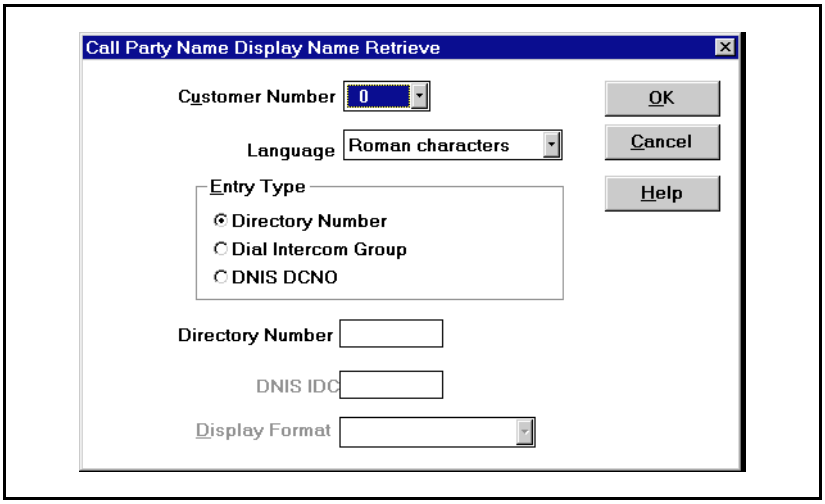
There is a single field in this dialog:

Customer Number: A single-line drop-down text box with a list of customer numbers defined for the open system. The text box contains the currently selected item.

CPND Name Retrieve Specify

If you want to define the CPND name data for downloading, choose **Retrieve - Specify** in the CPND Name view window to display the CPND Name Retrieve dialog.

Figure 57
Name Retrieve Specify



Note: CPND Name Retrieval—Synchronization prompt

When retrieving CPND names from the Meridian 1 (using Overlay 95), MAT prompts you for additional information necessary for retrieval. The additional information differs depending on the software release of the Meridian 1.

Display Format: before Release 19 of the Meridian 1, the Display Format was required for name retrieval. Beginning with Release 19, Display Format can be part of each CPND entry. Therefore, for Meridian 1 systems previous to Release 19, you are prompted for Display Format during name retrieval. For Meridian 1 systems beginning with Release 19, you are prompted for Display Format only if MAT does not find a valid Display Format. If MAT does not prompt for the Display Format, the applicable format is displayed, but not enabled for modification.

The criteria you can set for CPND name selection include the following:

Customer Number

A single-line drop-down text box with a list of the customer numbers defined for the open system. The text box contains the currently selected item.

Language

A single-line drop-down text box with a list of languages you can use for the display. The text box contains the currently selected item.

Directory Number

A numeric field that accepts up to 9 digits that represents the DN for this station. You can double click this field to display the list of currently assigned numbers in the numbering plan for the open system. You can select the number for this station in the Directory Numbers dialog. This is described in “Directory Number Assignment” on page 51.

Display Format

A single-line drop-down text box with a list of the CPND name display formats defined for the open system. The text box contains the currently selected item.

Entry Type

A selection field containing three radio buttons for the type of entry for this station. The choices include:

Directory Number: required to enter Directory Number

Dial Intercom Group: required to enter Group Member

DNIS IDC: required to enter DNIS IDC table number and DNIS IDC

When you click **OK**, you are prompted to set up the communications task.

Note: When you retrieve Station Data, CPND names are also retrieved, and the Station View is updated accordingly.

Synchronization status and Retrieval

If MAT performs a retrieval, including station and CPND name, the Synchronization Status determines whether the MAT data is updated. In all cases, the Retrieval log contains a record of the retrieval and the results of any comparisons with an existing Meridian 1 system.

- **NEW**: The data for this station should not exist on the Meridian 1 system and the station will not be updated.
- **TRN**: The data for this station in MAT should agree with the data in the Meridian 1. The MAT data is updated to reflect the current configuration on the Meridian 1.
- **CHG, RPL**: The data for this station have been changed since the last time the MAT and Meridian 1 have been synchronized. The station is not updated.
- **OUT**: The MAT user has marked this station for deletion, the current configuration of the station on the Meridian 1 is not relevant.

Upload

This task updates the Meridian 1 data block with selected data from the MAT database. You can select data items in the current list window (Station or CPND).

When you choose **Synchronize - Transmit** in the Station or CPND module, a submenu allows you to select criteria for uploading data to Meridian 1. The submenu contains the following items:

Selected: Upload only selected items in the current list of CPND or stations.

Log: View or clear a log of communications activity.

Selecting Data to Transmit

You can select items in the Station list or CPND list window to upload to the Meridian 1 (refer to “Global Update” on page 143). The MAT data overwrites the data currently residing in Meridian 1 for the selected items. When you choose **Synchronize - Transmit - Selected**, you are prompted to set up the communications task.

Communications Logs

All communications activity is recorded in log files that are stored in the current working directory of your MAT administration modules. There are five separate log files. The names follow normal PC conventions, as follows:

- **RTRSTN.LOG**: Station data retrieve
- **TRNSTN.LOG**: Station data transmit
- **RTRNAME.LOG**: CPND data retrieve
- **TRNNAME.LOG**: CPND data transmit
- **OVL81RTR.LOG**: Reconcile data transmit noting deleted sets information

Each of these logs is accessed from the **Log** menu in the appropriate module's **Synchronization - Transmit** or **Receive** menu.

When you choose **Log**, a submenu provides the following items:

View: Sends the log file to the viewer so you can browse or print the log. Log activity is appended to the end of the file, so the most recent activity is at the bottom of the viewer. See “The MAT File Viewer” on page 189.

Clear: Clears the log file. You should do this occasionally so that the file does not get too large.

> ***Note 1:*** There is no limit to the size of the log files, but there is a limit to the size of log files that the viewer can handle. There is a 100-page limit on log files for viewing from **Synchronize - Log - View**.
>
> ***Note 2:*** During station retrieval, you should limit the amount of activity in other Windows tasks. During long station retrievals, or if there is sufficient activity in other Windows processes, the capacity of the communications buffer can be exceeded. This condition terminates the retrieval process to prevent erroneous data from being entered into the station database.

You might notice that the Log window minimizes itself to prevent this occurrence. As the communications buffer starts to fill excessively, the Log window is minimized to allow faster processing of the incoming data. You should wait momentarily and restore the Log window to check the progress of the retrieval.

The Log window will remain on the screen longer if you resize it to contain fewer lines. Similarly, you should minimize the amount of window resizing and moving during station retrieval, since these activities momentarily prevent retrieval activity from processing the incoming characters.

If the capacity of the communications buffer is exceeded, necessary data is lost to MAT. MAT displays a message and terminates the station retrieval process. You will notice that the stations were not added to the MAT PC database.

You can repeat the retrieval to add the new station data. Alternatively, you can choose **Synchronization - Parse Only** to add the downloaded data to the MAT PC database, and continue the retrieval process from where it stopped. It is possible to retrieve a portion of the stations on the system by choosing **Station Retrieve - Specify**.

Viewing large log files

There is currently a 100-page limit on the size of log files and reports that can be displayed on the screen. This limit affects **Synchronization - View - Log** and **Reports** menu items. A message appears to warn you that the file is too large to be viewed in its entirety, and only the first 100 pages are displayed.

You can avoid this limit by:

- Periodically using **Synchronization Log - Clear** to prevent text from old retrievals or transmissions from unnecessarily adding to the size of the log file.
- Testing large reports on a portion of the data, using the Filter feature in the **Report Form** menu. For example, you can limit the report to the first 200 records by opening the report form and selecting the **Options - Report Filter**. To limit the number of records, click the System Fields button, select the **REC_COUNT** field and build the expression **SYS->REC_COUNT <= 200**. If a Report Filter already exists, this clause can be added using the **.AND.** operator.
- Viewing large files with another program. These files are too large for the Windows Notepad, however.

Transmission errors during retrieval

You should inspect the Retrieval Log after performing a synchronization. This log reports the number of stations added, the number of stations compared, and the number of stations with discrepancies from that comparison. In addition, the Retrieval Log might contain warnings from unrecognized data during the transmission. The unrecognized data might be the result of transmission problems.

Compare the expected number of stations to be retrieved to the number of stations actually retrieved. If too few stations were retrieved, look for warnings in the log file that indicate that not enough data was correctly received to recognize the station.

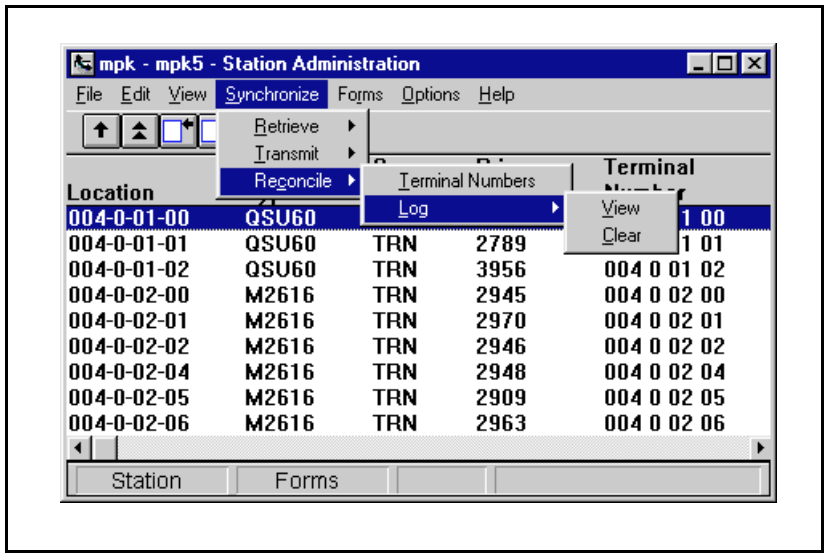
You should also note the number of compared stations. The first retrieval into the MAT PC database should only be adding stations. If any stations were compared, it might indicate a transmission error in the TN field that caused MAT to treat this station as an update to an existing station, instead of creating a new station.

Reconcile TN Feature

This tool corrects synchronization problems that may arise when changes are made to station data outside of MAT. These changes may include Set Removal, Set Relocation done through a TTY using Overlays 10 or 11. The switch database is changed but the MAT database on the local PC is left unchanged.

MAT users launch the Reconcile TN feature from the Synchronize menu in the Station Administration window. MAT compares the listed sets information with information in the MAT database against the switch database to determine which TNs are valid. Invalid TNs are removed. All removed TNs noted in a log file viewable under the **Synchronize - Reconcile - Log - View** menu. See Figure 58.

Figure 58
Viewing the log file



Note: The Reconcile TN feature requires some time to complete its function and can degrade system performance. Do this task when switch traffic is low or after hours to minimize the effect on the system's performance. User should back up the existing database before starting this function.

Conversion utility

Overview

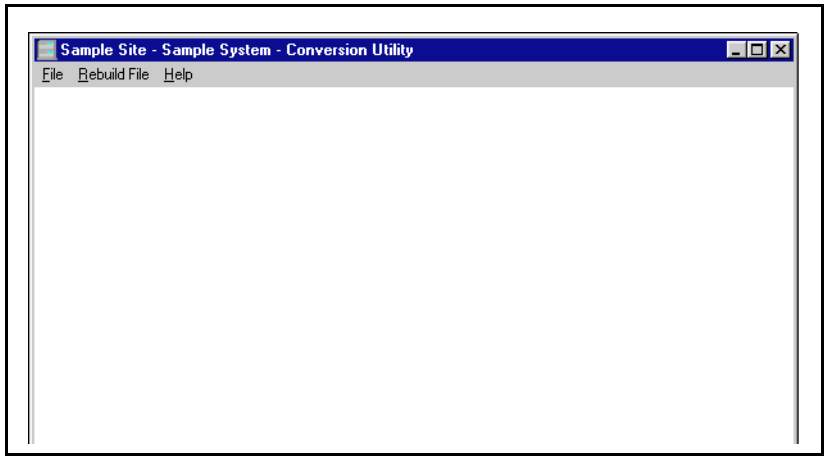
The MAT Conversion utility provides two functions:

- Rebuild of station data to the current MAT file structure. You might need to run this conversion if you have copied system data to your current release directories that was built in an earlier release.
- Import of station data from other applications.

Starting the Conversion utility

When you choose **File - Conversion utility** in the Station Administration module, the MAT Conversion utility window opens.

Figure 59
Conversion utility window



The window initially contains no data in the workspace. The menu bar contains the following drop-down menus:

- File
- Rebuild File
- Help

You can select the desired menu using the mouse (Click) or keyboard (Alt+Bold Character) in the normal way.

File Menu

The File menu provides the following functions:

Import: Lets you insert station data from another database into the current system.

Close: Quits the Conversion utility.

Rebuild File Menu

MAT administration can change the file structure of certain files. This can cause file errors during system maintenance. The Rebuild Files menu lets you check the individual files of system data and convert them to conform with the current file structure being used by MAT, if necessary:

All Systems: This option automatically searches the PC system for MAT systems and transforms selected files, if necessary.

Auto: This option automatically checks and transforms all files for each system, if necessary.

Select Files: This option lets you select MAT data files that will be checked for all systems, and transformed, if necessary.

Current System: This option checks selected files of the current system and transforms them if necessary:

Auto: This option automatically checks and transforms all files for the current system, if necessary.

Select Files: This option lets you select MAT data files that will be checked and transformed for the current system

Help Menu

The Help menu provides on-line help for the Conversion utility.

Rebuilding Files

The MAT administrator can modify the file structure used in MAT. This can result in File Errors during MAT processing. When this occurs, you can use the Conversion utility to rebuild the files, making their structure correspond with the current MAT file structure. In practice, the Conversion utility would check the structure of selected files and rebuild only if necessary.

Accessing the Files

To access the MAT data files for the Rebuild option, choose **Rebuild File - All Systems** or **Rebuild File - Current System**. Each option displays a cascading secondary menu that lets you choose to automatically detect files that require rebuilding or to manually select files for rebuild.

If you choose to select files, a Select Files dialog is displayed. This dialog contains a multi-selection list of files that comprise the MAT data. Selected files are indicated by highlight bars. Use the Windows vertical scroll bar to browse the entire list of files. Mouse click an item to toggle its selection status.

Click **OK** in the Select File dialog to start the rebuilding task for the selected files of all systems or the current systems as required.

Monitor Rebuilding Files

The Conversion utility checks all the selected files in each system and rebuilds all files it finds that require rebuilding. During this task, a status dialog is displayed that informs you of the progress of the task.

Upon completion, a status of **Success** is displayed. At any time you can click **Cancel** in the Status dialog to halt the rebuilding task. This might result in some files not being rebuilt. Another attempt at Rebuilding Files would now complete the task.

Importing Station Data

Station data is stored in accordance with the file structure and database rules defined in the MAT application. The Conversion utility provides a merge function (Import) that lets you update station data, and add new stations, from a data source other than a Meridian 1 (data defined in DBASE or CPLUS, for example).

Note that the merge function uses the DN as the key so that any imported data must include a DN field. Also note that, if the supplied DN is not currently used in the open system, the record will not be added unless a valid unique Location field (LOC) value is supplied. This means that to create a new record you must supply both a currently unused DN and a unique Location.

Data for import must have a Fields Definition file (default but not limited to files with.FLD extension) as well as a comma delimited data file (default but not limited to files with .TXT extension). The field file will identify which items in the data file belong to which MAT fields.

Note that the Fields Definition file must have the exact field names as defined in MAT. These can be found in the Select Data Field dialog in the Global Update function. The fields will be in the order in which the data is listed in the data file.

Considerations When Merging Key Values and Features

If you want to add or modify features for a particular record you must identify a “FTR” field for each feature being modified. The values must be as used in Meridian 1 as identified in the Features dialog when accessing multi-line telephone sets. For example, Call Forward when the forward DN is a four-digit number would be CFW 4 in Meridian 1.

If you want to add or modify key functions to a single line telephone, you must identify the key as KEY n, where n is the key number (include the space). If the value represents a Single Call Ringing key, then the field entry would be SCR nnnn, where “nnnn” is the selected DN.

Select a Data File

To select data to import, choose **File - Import** in the Conversion utility to display the Select an Import Text File dialog. The Text File Selection dialog lets you select the location and file name of the desired data file. By default, the dialog tries to locate files with .TXT extension, but you can actually use any extension in the File Name text box.

Click **OK** in this dialog to accept the data file name selection and display the Field File Selection dialog.

Select a Field File

Click **OK** in the Select an Import Text File dialog to display the Select an Import Field File dialog. The Field File Selection dialog lets you select the location and file name of the desired field definition file. By default, the dialog tries to locate files with .FLD extension, but you can actually use any extension in the File Name text box.

Click **OK** in this dialog to initiate the merge function.

Perform the Merge

When you have completed selection of the data and field files for merging to the current system data, click **OK** in the Select an Import Field File dialog to initiate the merge function and display a progress status message box that has a percent completion bar. This dialog has a **Cancel** button that will stop the merge before completion. When the progress bar indicates 100%, the **Cancel** button changes to **OK**. Click **OK** to return to the Conversion utility window.

The data is now part of the system and is available through the Station Administration module.

Example of Import Data

A typical import file might contain the following data:

- “3452”,”Robert”,”Williams”,”Accounting”
- “3497”,”Marie”,”Astor”,”Marketing”
- “8732”,”Lee”,”Smith”,”Accounting”
- “8743”,”Arthur”,”McKinley”,Facilities”
- “3469”,”Mary”,”Owens”,”Marketing”

where each record has four fields which would be defined in a separate file, as follows:

- DN
- FNAME
- LNAME
- DEPT

Note that the merge function uses the DN as the key so that any imported data must include a DN field. Also note that, if the supplied DN is not currently used in the system, the record will not be added unless a valid unique Location field (LOC) is supplied.

Generating Reports

Overview

The Report Generator module lets you create, view, print, and change custom reports. Access the Report Generator module by choosing **File - Reports** in the CPND and Station Administration modules.

MAT supplies several standard report forms for reporting MAT data. In addition, the Reports Generator module contains a form editor that lets you create custom report forms or edit existing forms. It also contains a viewer that lets you print reports or browse reports on the screen. A report executor lets you run the reports to the viewer for screen display, to a file, or to a printer. Custom selectable criteria allow you to tailor the report listing.

Reports Considerations

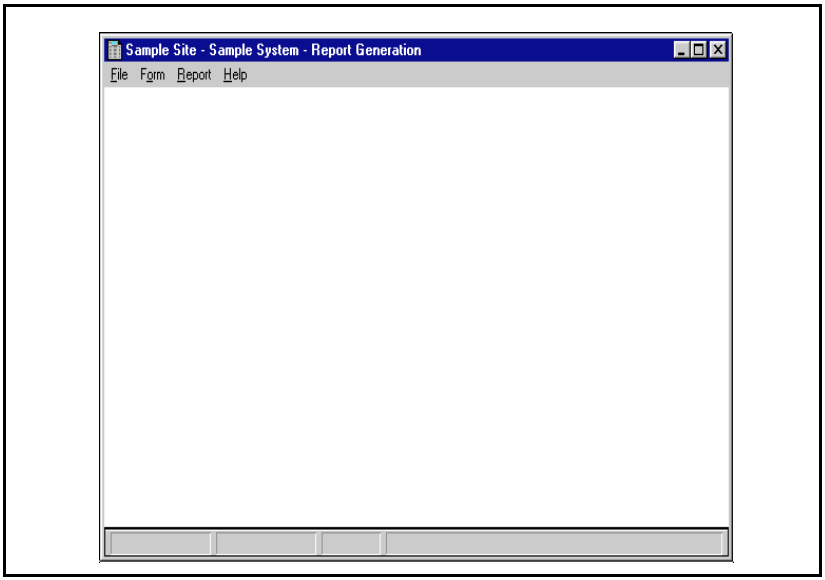
All report activity is performed in the current working directory—the system subdirectory. All forms are stored in this directory with a ".FRM" extension. Exported reports are also saved in this directory and are automatically given a ".TXT" extension. This means that you need supply only the *filename* (up to eight characters) when prompted to save a report to a file.

The MAT Report Generator requires that a printer be configured in the Windows software environment, although it is not necessary for the PC running MAT to be equipped with a printer.

Starting the Reports Function

Choose **File - Reports - Report Generator** in the Station or CPND module to display the MAT Report Generation window appears.

Figure 60
Report Generation window



There is no data in the work area when the window is first displayed. The window contains a menu bar with drop-down menus that let you perform global actions within the Report Generator:

- **F**ile Menu
- **F**orm Menu
- **R**eport Menu
- **H**elp Menu

File Menu

The only function available from this menu is the following:

Close: Closes the Report Generator.

Forms Menu

This menu lets you choose a current report form or create a new form.

New Report Format...: Lets you design a new form for a report.

Open Existing Report Format...: Lets you open a predefined form for the selected data in the system.

Reports Menu

This menu allows access to the report executor.

Run Report...: Displays a dialog that lets you access a report form that you can run (to the screen, to a printer, or to a file).

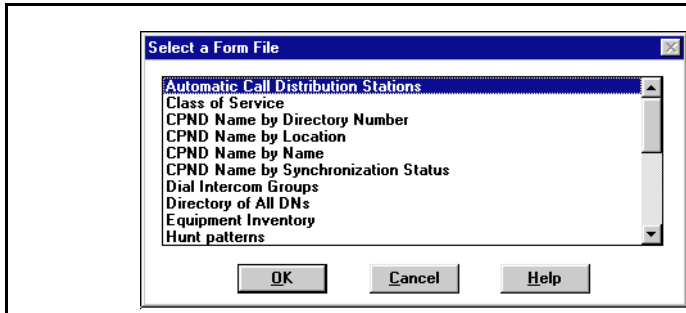
Running Reports

Running a report involves selecting a report to run and selecting a destination for the report. Selection criteria for the records you wish to choose are contained within the report form. If you desire different criteria, you can edit the form or create a new one. See “Report Criteria” on page 214. You can send a report to a viewer for screen display, to a file, or to a printer.

Select a Report

Select a report to run by choosing **Report - Run Report** in the Report Generator. **Run Report** displays a Select a Form File dialog with a single-choice scrollable list of report forms on your system.

Figure 61
Select a Form File dialog



Some reports in the list may be reports you have defined or modified for your needs. Default reports supplied with MAT include:

- Automatic Call Distribution Stations
- Class of Service
- Dial Intercom Group
- List of Power Failure Phones
- Message Centers
- Private Line
- Ringing Number Pickup Group
- Speed Call Groups
- System Speed Call Group
- Telephone Directory by Department
- Telephone Directory by Directory Number
- Telephone Directory by Location
- Telephone Directory by TN
- Telephone Directory by Name

The currently selected form is highlighted. Select a form and click **OK** to run a report using the currently selected form.

Select a Destination

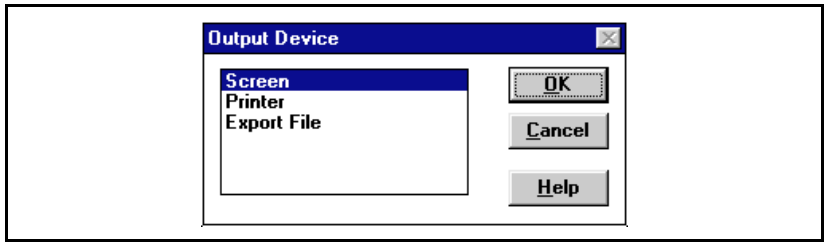
When you have selected a form and have chosen **Report - Run Report**, an Output Device dialog provides a list of possible destinations for the report.

The dialog displays a list of destinations for the report. See “View Report” on page 185.

- Screen
- Printer
- Export File

Select a destination and click **OK** to run the selected report.

Figure 62
Output Device dialog



Print Report

If you selected **Printer** for the report destination, the MAT Report Generator uses the Windows print function to direct the report to its default printer. The default printer for the report is identified in the form when it is created or edited. If you want to check or change the printer destination or setup you must do this from the Form editor before you run the report. Alternately, you can send the report to the screen and print from the viewer.

During printing, a Printing status box is displayed. You can stop the print job by clicking the **Cancel** button. A Report Viewer status box alerts you when the job is finished. Click **OK** to return to the Report Generator.

View Report

If you select **Screen** for the report destination, a viewer appears with the report in the work area.

This Viewer has the following menus:

File: lets you display a report summary, print the report, or exit the viewer.

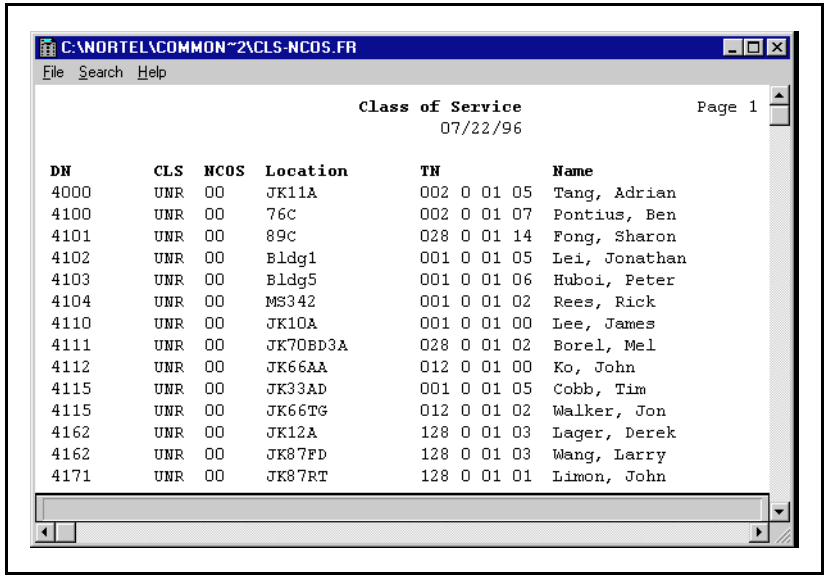
Search: lets you find text contained in the report.

Help: lets you access on-line help for the viewer.

See “The MAT File Viewer” on page 189.

You can print the report from the viewer to the printer defined in the report form, or to a printer you choose from the Viewer. You can also save the report to a file selected from the Viewer.

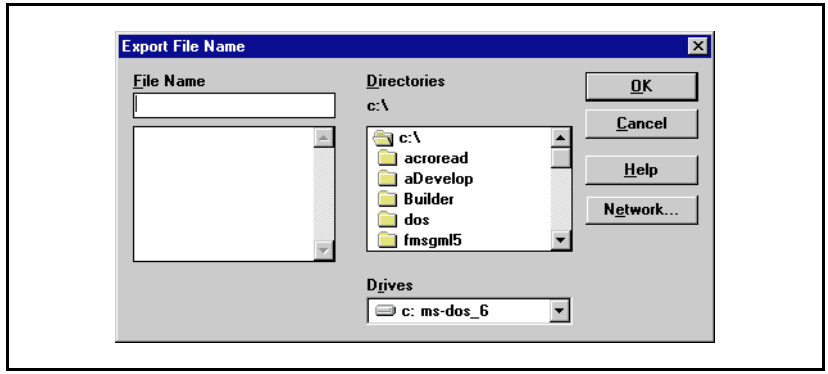
Figure 63
Example Report in the Viewer



Export Report

If you chose **Export File** for the report destination, the report output can be saved in a comma-delimited ASCII file. **Export File** displays a dialog that lets you choose a name for the report file.

Figure 64
Export File Name dialog



You can enter a filename up to eight characters. Click **OK** to send the report to the Viewer. See “View Report” on page 185. *Filename*.TXT, a comma-delimited text file with the *Filename* as entered in the text box, is saved to the current PC directory.

The MAT File Viewer

Overview

The Viewer lets you browse, print, and save MAT files accessed during Station Administration tasks. You cannot access the Viewer as a separate module. It is invoked when you attempt to print or display files created during MAT database administration. The files that can be viewed include:

- Reports
- Designation Strips
- Station Validation Log
- Communication Logs
- Station and CPND Administration list views

Viewing a File

When the File Viewer starts, the scrolling Viewer window contains the data from a file created during MAT database administration. The Viewer does not allow editing, so the viewed data is in a fixed format.

You can browse and print the data using the menus, as follows:

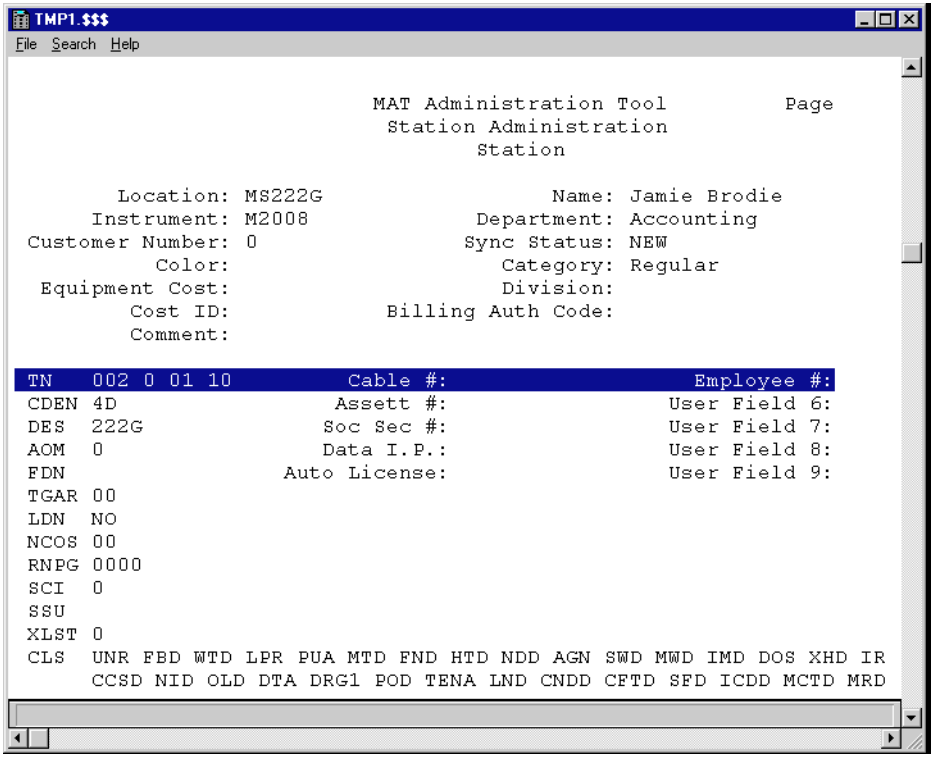
Viewer File Menu

The **File** menu lets you display a file summary, save the file to a selected directory, print the file, or exit the viewer.

Save as: Lets you save the displayed data as a text file to your PC system.

Summary: Displays a file summary of the displayed data.

Figure 65
File Viewer window



Print: Sends the file to the default printer (the printer is normally the default printer as defined in Windows). However, for reports, the printer is defined in the form.

Printer Setup: Allows you to select a print destination and set printer options.

Close: This option closes the Viewer and returns to the window that invoked it.

Viewer Search Menu

The **Search** menu lets you find a text string that might be contained in the displayed data.

Find: Lets you define a text string to find. The **Find** function is not case sensitive.

Find Again: Lets you find the next occurrence of the currently defined string. This option is dimmed until you have searched for a string.

Changing Viewed Data

The data displayed in the viewer is in a fixed format, defined in MAT, for the file being viewed.

Browsing the File

The MAT Viewer is a line viewer with the current line highlighted. You can use the arrow keys or <Page Up> and <Page Down> to move the highlight one line or one screen at a time. You can also use the Windows vertical scroll bars to scroll the report, moving the highlight bar as you scroll. The Windows horizontal scroll bar lets you browse entire lines when the lines are too long for the window.

Use the **Search** menu to find selected text. A successful **Find** highlights the line containing the search text.

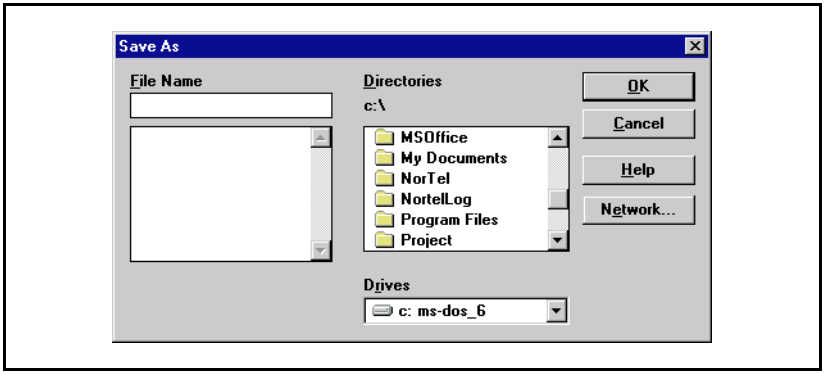
Save As

The file is displayed in the Viewer with a default file name in the title bar. You can save the data as an ASCII text file. Choose **File - Save As** to save the current file with a different name or location

Select a File Name

The Save As dialog is the standard window used to specify the file name and file location (for a full description of this dialog, refer to your Windows documentation). The dialog contains a single-selection scrollable drop-down list of disks that your PC can access. Select a disk to display the list of directories on the disk in a single-selection scrollable Directories list field. Select a directory to display a single-selection scrollable list of files in that directory. Select an item from the File Name list or type in a file name.

Figure 66
Save As dialog



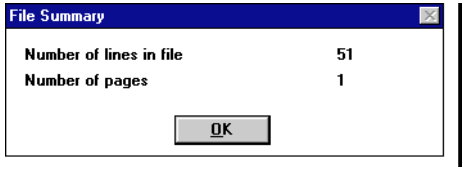
At any time, click **Cancel** to return to the Viewer without saving the file. Click **OK** to save the file with the specified file name.

The saved file uses the current default Windows font for character formatting. Any character formatting in the original file (from a Report, for example) is not saved.

Display a File Summary

Choose **File - Summary** to display a File Summary status box.

Figure 67
File Summary dialog



The summary gives the number of lines for a text file (or number of records for a database report file) and the number of pages in the file. Click **OK** in the status box to return to the Viewer.

Print from the Viewer

You can print the file (exactly as displayed) to a default printer directly or you can select another printer for the task. Choose **File - Print** to print the contents of the Viewer to one of the following destinations:

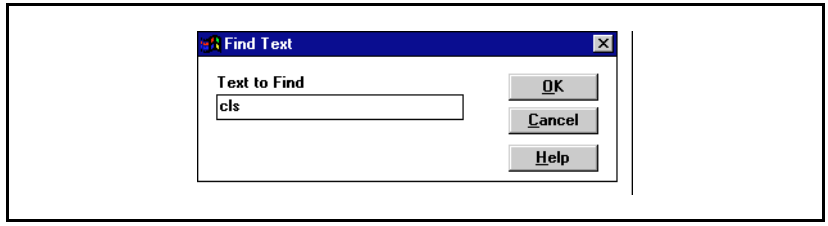
- If the Viewer is displaying a report, the print destination is the destination defined in the report. If your PC cannot find this printer, MAT displays a status message. Click **OK** in the Status message box to return to the Viewer.
- If no printer is defined in the file being viewed, the print destination is the current printer defined in Windows. This can be the Windows default or a printer selected in the **File - Print Setup** option of the Viewer.

A progress status message is displayed while the file is printing (or sent to a print spooler if applicable). Click **Cancel** in the Status box to stop printing. When the task is complete, MAT returns to the Viewer window.

Search the File

Choose **Search - Find** to display a dialog that lets you enter text you wish to find. If **Find Again** is available, the dialog contains the previous search data.

Figure 68
Find Text dialog



Click **OK** to accept the data in the dialog and proceed with the search. Click **Cancel** to return to the Viewer window. Click **Help** to display on-line help for this dialog.

The text box accepts any input. The find function is not case sensitive.

The Viewer highlights the line containing the first occurrence of the **Find** text. The **Find** function always starts at the top of the report, regardless of the current cursor position.

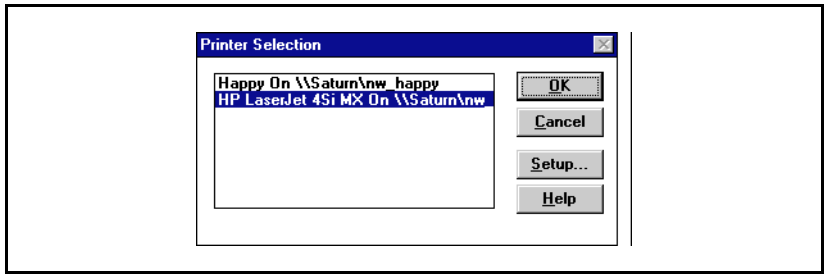
When the first search is complete, **Search - Find Again** is available. If you choose this item, the highlight bar moves to the next occurrence of the text. You can repeat this until a status message indicates that are no more occurrences. Click **OK** in this status box to return to the Viewer.

When you finish searching, click **Cancel** to return to the Viewer.

Printer Setup

To define the printer destination and setup from the Viewer, choose **File - Print Setup**.

Figure 69
Printer Selection dialog



The Printer Selection dialog contains a single-selection scrollable list of printers accessible to your PC. Click **OK** to accept the selected printer and return to the Viewer window. Click **Cancel** to return to the Viewer window. Click **Help** to display on-line help for this dialog.

The Setup button opens the standard Windows printer setup dialog for the currently selected printer. Refer to your Windows documentation for information on Print Setup.

Click **Cancel** in the Print Selection dialog to return to the Viewer without changing the Print setup. Select a printer and click **OK** to set the selected printer as the Viewer default and return to the Viewer. This new printer destination is only valid for this viewer session. The report form still retains the original print setup.

Exit the Viewer

Choose **File - Close** to close the Viewer and return to the Report Generation window.

Designing Report Forms

Overview

The MAT application includes several pre-designed forms you can use to run the most common reports. MAT also includes a Report Generator module that includes a Forms editor. The editor lets you modify existing forms or create your own forms for customized reports.

The Forms editor lets you generate a customized layout for a report by piecing together predefined report sections.

Form Section Concepts

The Report Generator organizes a report by sections. A report form can contain one or more sections:

- Report Header
- Page Header
- Sort Header(s)
- Detail Section
- Page Footer
- Sort Footer(s)

Each of these sections is optional, but a form must contain at least one section and can have only one of each type. Each section allows an internal free layout of data. The only restriction is the position a section occupies on the report in relation to the other sections.

When you insert a new section in a form, it automatically positions itself correctly relative to other sections. This position is indicated in the Editor window by a line with the section title printed on it. This line is not part of the form, it merely serves as the top boundary of the section it indicates. The list above indicates the order in which the sections will appear in the form.

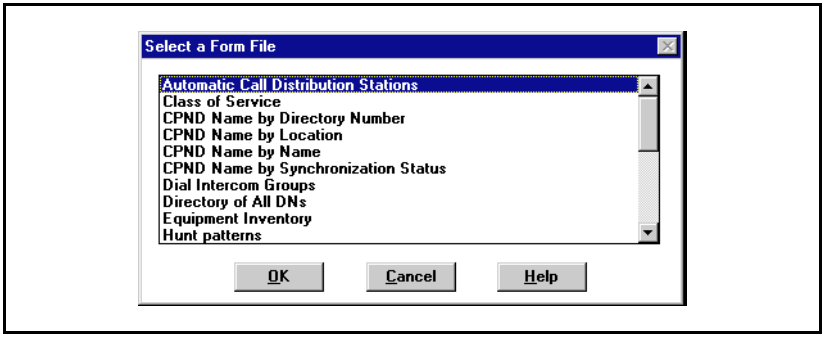
Arranging sections within a form is described in “Validating the Data” on page 66.

The Forms Editor

The Forms Editor is an application within the Report Generator that lets you design and customize a report using the current database.

Choose **Form - New Report Format to display** the Forms Editor, with a blank form in the working area. Choose **Form - Open Existing Report Format** to display a dialog that lets you select from a list of forms for the current system database.

Figure 70
Select a Form File dialog



The currently selected form is highlighted. Select a form from the list and click **OK** to invoke the Forms Editor. The Forms Editor contains a menu of actions to perform.

File Menu

This menu contains commands for saving the current report file and specifying the report parameters.

Select Report View: Lets you select the key selection criteria that determine the content of the report at runtime.

Save: Store the current report form to a file. If it is a new form, you are prompted for a filename (up to eight characters followed by a period and an extension of up to three characters).

Save As...: Store the current report form to a file. Report form files must be stored in the common data directory. MAT will not allow changes to the path for these files.

Printer Setup: The Windows default printer is automatically assigned to the current form when you save it. This selection lets you select a different printer and printer configuration to be associated with the current form from a list of installed printers.

The printer options that you select here determine the width and height of the report. The width of the report is indicated by the length of the section separation lines in the form editor window.

Exit: Close the Forms Editor and return to the Report Generation window. If the current form has not been saved since the last change, you are prompted to save it before exiting the editor.

Edit Menu

This menu contains miscellaneous edit and cursor navigation functions:

Insert Line After/Before: Puts a blank line following/preceding the current cursor position.

Delete Line: Removes the current line, moving all successive lines up.

Highlight Off: Turns off any highlighting in the current form (lets you deselect text and fields).

Beginning/End of Line: Moves the cursor to the left/right end of the current line.

Next/Previous Word: Moves the cursor to the beginning of the next/previous word or field in the form, going to the next/previous line if necessary.

Section Menu

This menu contains commands to insert, edit, and delete report sections.

New...: Lets you add a section to the current form. Sections include:

- Report Header: Appears at the top of the report only
- Page Header: Appears at the top of each page of the report
- Detail Section: Defines data to be reported
- Page Footer: Appears at the bottom of each page of the report
- Sort *n* Header: The *n*th sort criterion field for the report (*n* = 1 - 9)

The section title is displayed at the current position of the selected section on the form. This line indicates the Forms Editor cursor location. It will not appear on the printed form.

Edit Current...: Lets you define the layout of the section in which the Forms Editor cursor is currently positioned. Displays a dialog containing check-boxes for defining section layout at runtime. Choices include:

- Start new page before this section
- Start new page after this section
- Do not include blank lines
- Suppress trailing (or leading) blanks in a field
- Titles on every page of the report

Delete Current...: Removes the section in which the cursor is currently positioned.

Sort Field...: Lets you change the current sort field selection. This selection is not available unless the form has sort fields defined (use the **Section New** function to insert sort fields).

Break Field...: In a typical report, the break field is the same as the sort field. This selection lets you define a field for a section break that is not a sort field.

Field Menu

This menu contains options to insert, modify, delete, and maintain fields.

Insert New Field: Displays a submenu that lets you choose a field type for insertion into the form at the cursor position. Field types include:

- **Data Field**: Displays a list of data fields in a record of the system database
- **Calculation Field**: Displays a box for entering a formula for the field
- **System Field**: Displays a list of MAT system fields

Edit Current Field...: Lets you modify attributes for the current field.

Edit Field Expression...: If you have a calculated field at the cursor position, this selection lets you modify the formula.

Options Menu

This menu lets you define the appearance of the report and select data records for inclusion in the report.

Report Parameters...: Brings up a dialog that allows you to specify certain report parameters:

- Name of the report (This is not the Windows filename.)
- Margins for the printed page
- Output of some trial records for form layout adjustment
- Default date format for input and during execution

Report Filter...: This option allows you to enter a filter criteria for the report. Each data record is tested with the expression that you provide here. A record is selected only if this expression evaluates to a TRUE value. For example, if the expression was *DN->amount>1000*, then only records with a DN higher than 1000 are included in the report.

Fonts Menu

This menu contains formatting commands for highlighted characters (and field values) at runtime.

Normal: Removes character formatting, if any)

Formatting: Normal, **Bold,** Underline, *Italic*, Superscript, Subscript, ~~Strike~~.

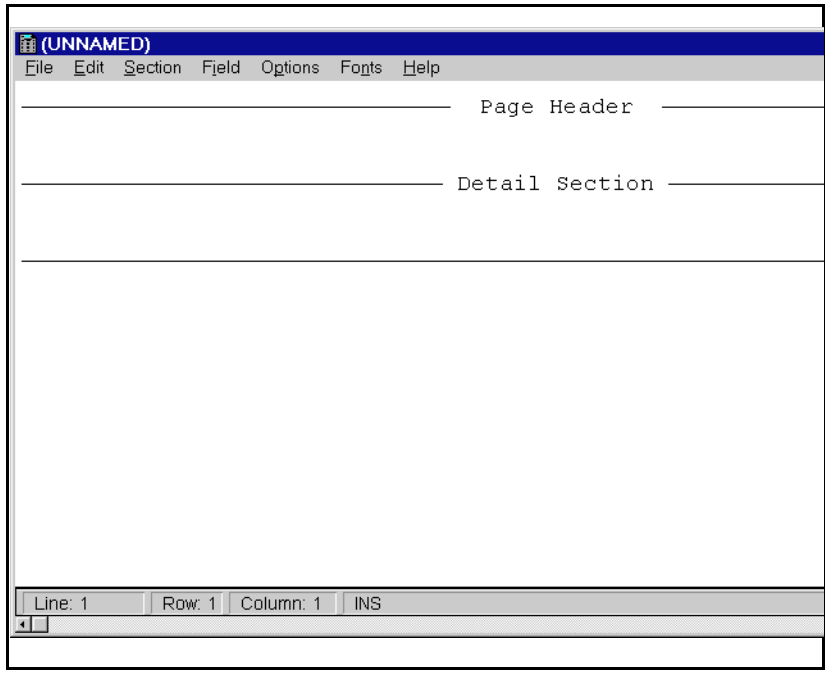
Fonts: Lets you select font and size for highlighted characters and fields. The report generator allows only fixed space fonts. You should be careful that columnar text uses the same font size and spacing to maintain column alignment.

Changing Sections

Here is an example of a blank form with all sections in place. The sections are divided by a line labeled with the section name. These lines are place indicators only and will not appear on the printed report.

The **Section** menu lets you change the sections as described below.

Figure 71
Example blank report form



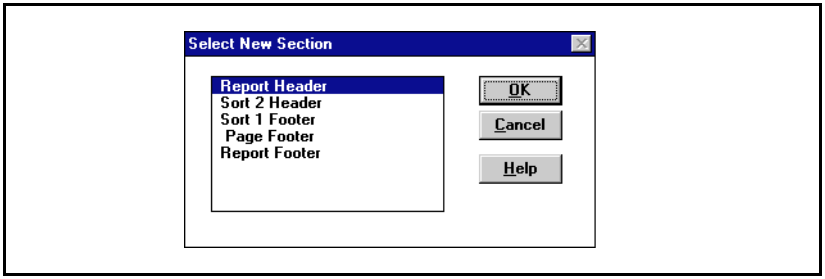
Insert a Section

To insert a section in a form, choose **Sections - New** with the cursor anywhere in the Forms Editor window. This displays a Select New Section dialog with a list of available sections (all sections that do not appear in the form).

The currently selected Section is highlighted. Select a section and click **OK** to insert the section in the current form.

At insertion time, each section contains one blank line. Use the **Edit - Insert Line After/Before** functions to change the section size at any time while the cursor is in the work area of the section (below the section title line and above the next section title line).

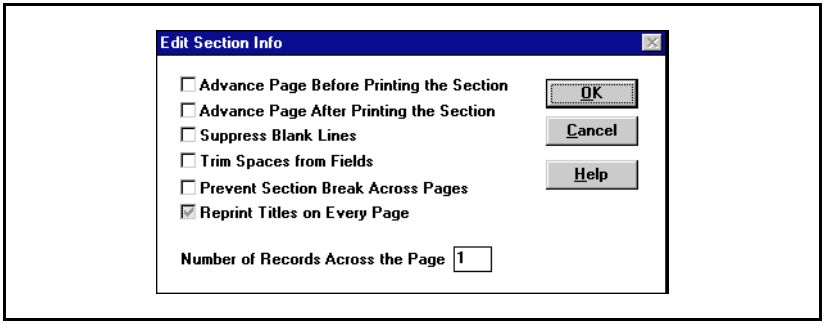
Figure 72
Select New Section dialog



Define Section Parameters

You can set runtime parameters for the section at the current cursor position. Choose **Section - Edit Current** to display an Edit Section Info dialog with check-boxes that let you set or clear section parameters.

Figure 73
Edit Section Info dialog



Select the appropriate check box to toggle parameter selection. The parameters include:

- Advance Page Before Printing the Section: The section is printed at the top of the next page.
- Advance Page After Printing the Section: Causes a printer Form Feed after this section.
- Suppress Blank Lines: Causes blank lines not to be printed.
- Trim Extra Spaces from Fields: If a field value is shorter than the field maximum length, this selection causes the field length to be truncated to the length of the value.

  Note: If you are using a columnar format, this parameter might cause misalignment of columns.

Report Header / Footer

These are printed only once, at the beginning/end of the report. The header is generally used as a title and description of the report. The footer might be used as a report summary. A report header and footer can contain free text and fields such as System Date and Time.

Page Header / Footer

These are printed at the top/bottom of every page in the report (beneath the Report Header on the first page and above the report footer on the last page). The header might contain text such as Report title, column headers and any other pertinent text as well as fields such as System Page Number, Date, and so on. The footer might be used for page numbers and page by page field totals or other pertinent data or text.

Sort Header / Footer

Each of these sections indicate a field that the report will use for a sort break. The field you choose is not printed. You can place text or fields or both text and fields at these section breaks to describe the sorts being used in the report.

Detail Header

This section contains a list of data for each record of the database, selected and sorted according to defined criteria.

Edit a Form

Text and data are added at the current position of the cursor within the form. Move the cursor using the mouse or the keyboard arrow keys. The status line at the bottom of the window gives the cursor position by line (row) down and character (column) across. The **<Ins>** key toggles the insert/overtype mode. The status line indicates **INS** for insert mode (text moves everything to the right of the cursor to the right) or **OT** for overtype mode (text replaces existing text at the cursor position).

Type to insert text. There is no automatic line wrapping. If you insert a carriage return (**<Enter>**), the cursor is returned to the beginning of a new blank line.

You can use the **Edit** menu to move the cursor within a line, as follows:

- **Start of Line**: left end of line
- **End of Line**: right of the last character on the line
- **Next Word**: first letter of the word to the right of the cursor
- **Previous Word**: first letter of the word to the left of the cursor.

To insert and edit a field at the current cursor position, use the **Field** menu.

Insert a Field

Choose **Field - Insert New Field** to display a submenu with a list of data field types to paste at the current cursor location. This option is not available when the cursor is positioned on a section separation line or on an existing field.

The selected field appears at the current cursor location as a series of "x" symbols that represent the maximum number of characters in the field, as defined in the database. You can delete any number of field symbols to reduce the field length. To increase the field length, position the cursor on any field symbol except the first one, and type spaces. You can change the current field attributes by choosing **Field - Edit Current Field**.

Insert Data Field

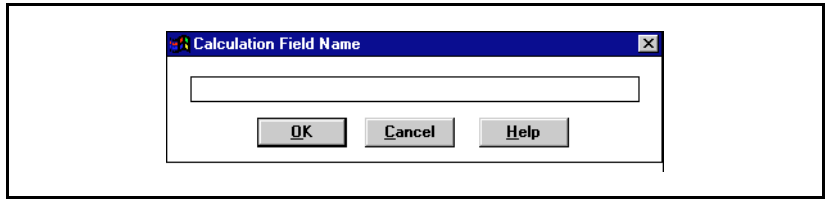
A data field is one field in each record of the current database. If you choose **Field - Insert New Field - Data Field**, a list of data fields is displayed in a Select Data Field dialog. See “Select Data Field” on page 145 for further details.

Click **OK** to paste the selected field into the form at the current cursor position.

Insert Calculation Field

A Calculation field contains an expression that is a combination of data, functions, and operators. At runtime, the expression result is output for each record. You must supply a name for the field as well as the expression to be evaluated. The **Field - Insert New Field - Calculation Field** option first prompts you for the name of the field in a Calculation Field Name dialog.

Figure 74
Calculation Field Name dialog



You can enter up to 48 alphanumeric characters (not blanks) in the text box to represent the calculated field name.

Click **OK** to enter an expression for the calculated field. The procedure for expression entry is the same as for “Define Selection Criteria” on page 144.

Insert System Field

A System field contains MAT system-dependent information, such as date, time, report page number, and record count. This information is typically in the report or page header or footer. One System field, WRAP_OVERFLOW allows a data field to overflow to the next line or lines. For example, a comment field of 30 characters could contain 10 characters in the data field itself and ten in each of two WRAP_OVERFLOW fields (generally placed directly under the data field itself).

If you choose **Field - Insert New Field - System Field**, a list of System fields is displayed in a Select System Field dialog. The procedure is the same as in “Select Data Field” on page 145.

Click **OK** to paste the current highlighted field in the form at the cursor position.

Edit Field Attributes

This option, available by choosing **Field - Edit Current Field**, is used to edit the attributes for the current field. This option is available only when the cursor is positioned on a field. The field name is displayed in the status bar of the form window. The option displays a set of attributes that can be modified for the current field. You can modify the field attributes as needed.

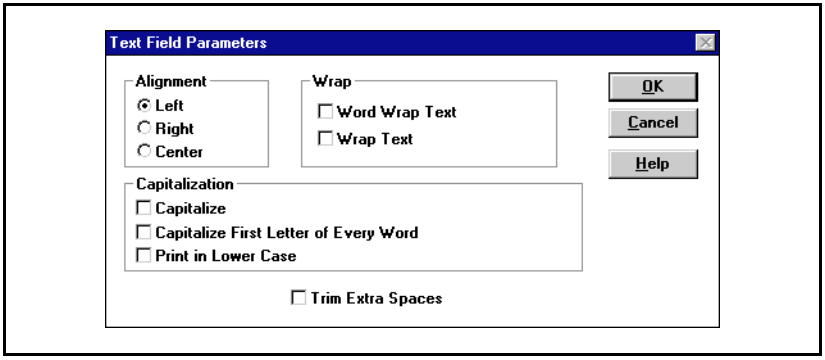
The attributes that you can modify depend on the type of field. Field types include:

- Text (alphanumeric characters)
- Numeric (numbers, including thousand separators and decimal point)
- Date (date in predefined formats)

Edit Text Field Attributes

If the cursor is located within a text field and you choose **Field - Edit Current Field**, a Text Field Parameters dialog displaying the current attributes for the field appears.

Figure 75
Text Field Parameters



The following parameters can be modified:

Field Alignment: By default, text data at runtime is left-aligned. You can use the radio buttons to select left, center, or right alignment.

Wrap: If the field length on the form is too short to accommodate the data at runtime, you can select a wrap option to run the text to a **WRAP_OVERFLOW** System field that you have already defined. The Wrap option breaks at the end of the current field, and the Word Wrap option breaks at the end of the last word before the end of the field. The default attribute has no wrap option selected.

Capitalization: By default, all text in the data field is printed as stored in the database. You can change this to all capitals, leading capitals, or all lower case, by selecting the appropriate check-box.

Trim Extra Spaces: This check-box trims the field length to the length of the data that is entered at runtime.

> ***Note:*** If you are using columns, this option might cause columns to become misaligned.

Edit Numeric Field Attributes

If the cursor is located within a numeric field and you choose **Field - Edit Current Field**, a Numeric Field Parameters dialog displaying the current attributes for the field appears.

The following attributes can be modified:

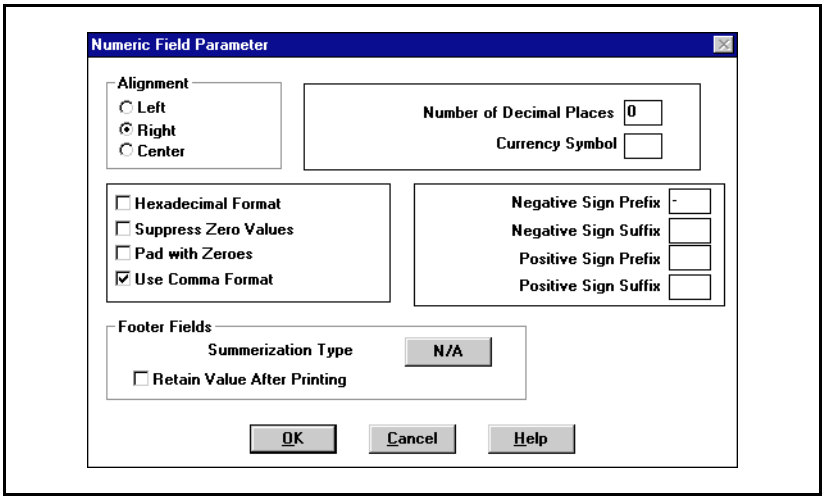
Field Alignment: By default, numbers are left-aligned at runtime. You can use the radio buttons to select left, center, or right alignment.

Number of Decimal Places: If the field contains a real number, this option lets you select the number of digits printed to the right of the decimal point.

Currency Symbol: If the field represents money, you can use this option to define the currency symbol.

Sign Representation: This option lets you select how to represent negative and positive number values. You can enter a character for prefix and suffix for both positive and negative numbers.

Figure 76
Numeric Field Parameters dialog



Zero Values: Check the Suppress Zero Values check-box to suppress printing this field if it contains a value of zero. Check the **Pad with Zeroes** check-box if you wish to align the number to the right of the field and fill with leading zeroes. Check the **Use Comma Format** check-box to insert a comma between thousand values in the field.

In addition to these attributes, you can edit the following attributes for fields that are located in the footer section of the report:

Summarization Type: A numeric field in the footer could require the report to print a summary value. This option is a function selector that displays a list of possible summary values, such as total, average, maximum, minimum, or count. You can also print the actual value for the field by selecting Value.

Retain Value After Printing: If the footer is a page footer, you can check this option to print "running" values instead of the value for each page.

Edit Date Field Attributes

If the cursor is located within a Date field and you choose **Field - Edit Current Field**, a Field Name Edit dialog displaying the current attributes for the field appears.

Figure 77
Date Field Edit dialog

You have a choice of four formats for the Date output, selectable by radio button:

MMDDYY
DDMMYY
MMDDYYYY
MMMDDYYYY

You can also define the date delimiter by entering a required one-character delimiter in the Date Delimiter text box (/ or - , for example).

Edit Calculation Field Expression

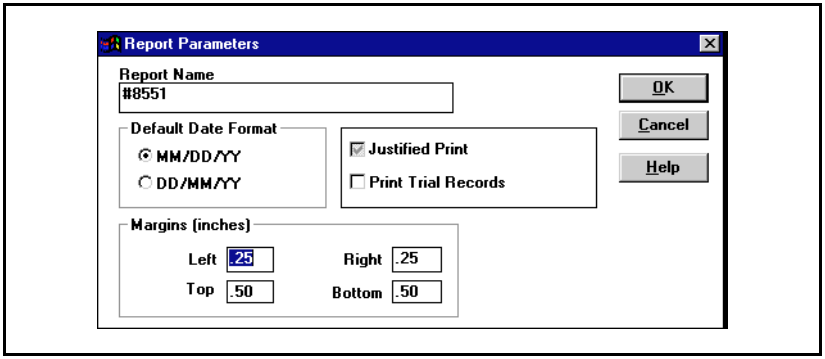
This option is available only when the cursor is positioned on a calculation field and you choose **Field - Edit Field Expression**, or when you are first inserting a calculation field in the form. The option shows the existing calculation expression, if any, in a dialog and allows you to make modifications. The action of this dialog is the same as that for “Define Selection Criteria” on page 144.

Setting Report Parameters

The Forms Editor **Options** menu lets you set parameters for the report. These parameters are stored with the form and will be operative at runtime.

The parameters are defined in a dialog when you choose **Options - Report Parameters** in the Forms Editor. Parameters include the following:

Figure 78
Report Parameters dialog



Report Name: A text box that lets you enter up to 36 contiguous alphanumeric characters. This name is used in the MAT system as the name for the report and the form. This is not the same as the Windows filename.

Default Date Format: A pair of radio buttons that lets you define the format in which dates are printed at runtime. The two formats are MM/DD/YY or DD/MM/YY.

Print Trial Records: Run the report with just a few records. This enables you to check that the form generates a report with a suitable appearance and layout.

Margins: Four text boxes that let you set the page margins. Enter numeric data only, and ensure that the page layout is valid.

Character Formatting

You can set the appearance of printed text using the **Fonts** menu. By default, text and fields are output in the Windows default font with Normal (unmodified) attributes.

A selection from this menu acts on the selected data. To highlight data (text and fields) place the cursor at one end of the data to be highlighted, hold down the left mouse button and move the cursor to the other end of the data. To turn off highlighting, click anywhere in the form that is not highlighted.

Use the **Fonts** menu to display a list of character enhancements. Select one to print the highlighted text with that enhancement. Enhancements include the following:

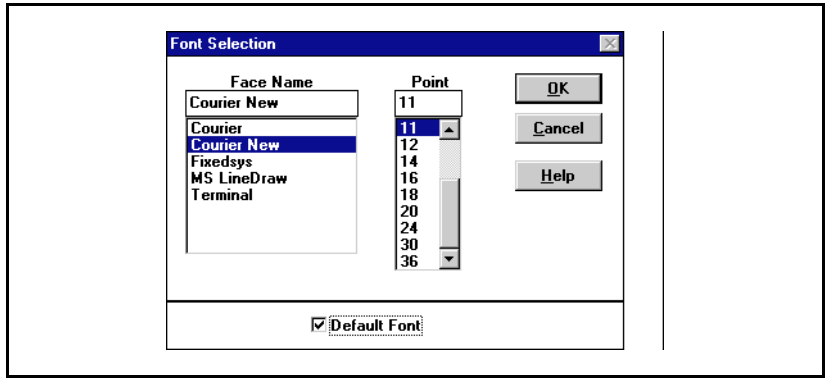
Normal, **Bold,** Underline, *Italic*, Superscript, Subscript, ~~Strike~~.

When you apply an enhancement, highlighting is removed. If you desire more that one enhancement for any text, you must highlight the text again and select another enhancement. To remove an enhancement, highlight the text and choose **Font - Normal**.

Font Selection

Choosing **Fonts - Fonts...** brings up the Font Selection dialog box, from which you can select a font for the selected text.

Figure 79
Font Selection dialog



The Face Name box contains the name of the font for the selected text. A list box shows available fonts with the current font highlighted. Click the desired font to change the current font in the Face Name box. Use the arrows to help find the desired size, and click to select the font size.

Click **OK** to set the highlighted text to the currently selected font and size.

To use a single font for the entire report, select the font face and click the **Default Font** check-box. This becomes the Normal enhancement selection.

Report Criteria

The Forms Editor **Options** menu lets you select criteria for record selection in the report. The criteria cannot be set at runtime, and are stored with the form in which the selection is made. The criteria are defined in an expression that displays in a Select Record Criteria dialog when you choose **Options - Record Criteria**. The action of this dialog is the same as for "Define Selection Criteria" on page 144.

Building a Report in the MAT Report Generator - Form Editor

Reports in MAT are built using report forms. The report form contains the information that allows the same report to be run repeatedly with new or updated data. The report form stores information that fully describes the report to the MAT software. A report form is comprised of several sections that describe different aspects of the report. A number of standard report forms are provided with the MAT software to provide some commonly used reports.

This section describes a typical session to build a new report form. As an illustration, it produces a modified version of one of the MAT standard reports: Telephone Directory by Department. The report will print the department name once and print the station information for each department underneath the department heading.

This section describes a step-by-step process to produce a report form. As you become more proficient using the Report Generator, you might find that you use a different series of steps to build or modify reports. Perform the following steps to build a report form:

1 Decide what information needs to be displayed on the report.

2 Select the Report View that best provides the information.

3 Place the individual data fields on the report.

4 Decide if the report lines should be sorted.

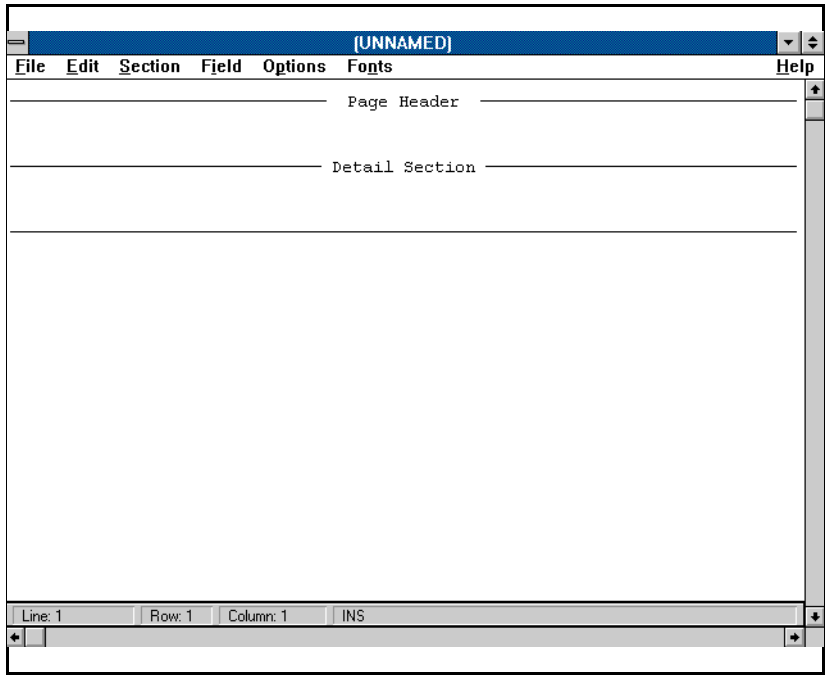
5 Specify any special printer considerations for this report.

6 Apply the finishing touches.

7 Save the report and test the results.

To work with Report Forms, start the Report Generator (choose **File - Reports - Report Generator**). Choose **Form - New Report Format**. This example shows how to create a new form. The report generator places an empty report form on the screen.

Figure 80
Empty Report Form



Decide what information needs to be displayed on the report

As we will see in the next section, information in MAT is organized Into several logical databases. A report can use any one of these logical databases. There is also MAT system-dependant data that can appear on a report. This data includes date, system name, page number. Reports also can contain fixed text, typically headings or other constant text information.

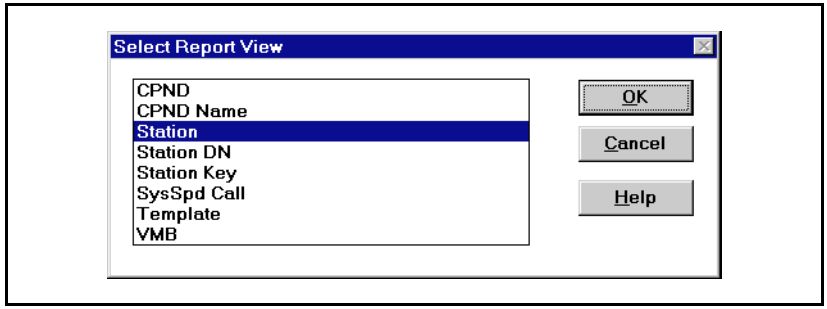
In this example, we are using station information (as distinguished from CPND or VMB information). We can sketch out a rough picture of the report as a guide to what will fit on the page and how much heading information will be included.

The basic model of the Report Generator is to read each record in the logical database, decide if it should be included in the report (according to the Report Filter). Some reports sort the records (according to the Sort Header sections). Finally, the records are printed. Some reports print out a line for each record included in the report (specified in the Detail section). Some reports print out summary information (specified in the Sort Header or Sort Footer section), such as the total number of particular instrument types. Some reports combine the detail and summary information

Select the Report view that best provides the information

After deciding to build a report focusing on station data, pick an appropriate Report View. Views provide alternative ways of looking at the data. Some of the report views describes the type of data. If the report describes CPND configuration information, then choose the CPND view; for CPND Name information (by Directory Number or Group) use the CPND Name view; for VMB information (by Directory Number) use the VMB view.

Figure 81
Select Report view



Station data is provided with some alternative views. If the report should print one line for each station, then choose the Station view. If the report should print one line for each Assigned Directory Number, then choose the Station DN view. If the report should print one line for each station key, then use the Station Key view. (In the Station Key view, single line information is included by assigning “pseudo key numbers” to the single line key features.) The SysSpdCall view is a special view primarily designed for the System Speed Call Report. It provides one record for each system speed call list user. If the report is selecting only certain records from the database or printing only summary data, then it will not actually print a line for each record, but the view describes how the selecting and sorting process examines the records in the database.

Place the individual data fields on the report

Once the Report View has been chosen and the basic design of the report has been defined, it is time to place the data on the report page. The Report Generator Forms Editor shows the current form broken into its logical sections. Initially the Page Header section and the Detail section are displayed. As other sections are incorporated into the form, they are displayed as well. In this example, the report contains the following sections:

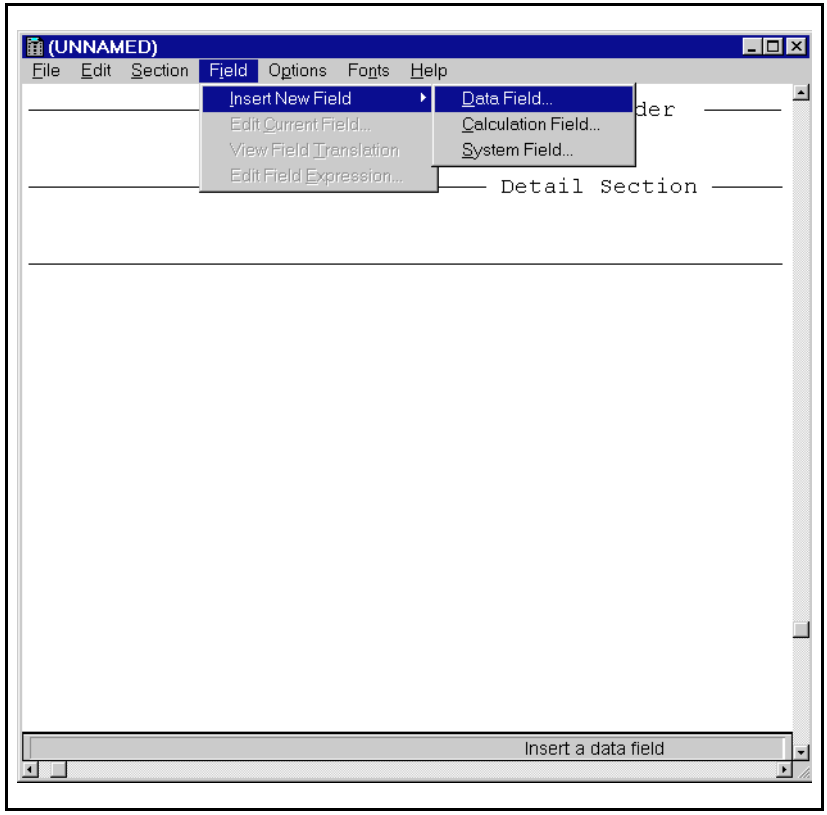
Page Header: This section contains the information displayed at the top of each page. Typically, it would contain the report title, the column headings over the data, the page number, the system name.

Detail: The detail section describes the data items that would appear on each line in the body of the report. Typically, it would contain data from each record in the database that is included in the report. The data might be data items from the record or calculated fields built from the data fields. Calculations allow the report to create specially formatted names or other special expressions.

Sort Header: The sort header sections (there can be several) describe how the lines in the report will be ordered. Sort 1 Header describes the primary sort, if two records have the same value for the sort field, then Sort 2 Header can be used to refine the order of the report. A report that should be ordered by name, might specify LastName in Sort 1 Header and FirstName in Sort 2 Header.

It is often easier to design the report by specifying the Detail section first. This allows you to lay out the data on the page before placing the column headers. Treat the screen as a blank report page and position the cursor in the Detail section where the field should be placed. Choose **Field - Insert New Field - Data Field** to see a list of available data items.

Figure 82
Inserting Data Field in the Details section



Choosing **Field - Insert New Field - Data Field** displays a list of the fields that apply to this report view. This Select Data Field list will also appear in other situations where you need to select a field. Several data fields have been added specially to help produce reports and some fields have special meanings that affect their use in reports. Some examples of special reporting data fields include:

ADN - All Directory Numbers: a list of all the Directory Numbers assigned to the station. This field creates a text field with the DNs separated by a space.

ACDS: Keys Assigned to Automatic Call Distribution, showing both the ACD DN and Position ID.

DN: This the Directory Number assigned to a single line station. The PRIMEDN field contains the Directory Number assigned to a single line station and the Directory Number assigned to Key 0 on multi-line station.

Key features should be reported from the Station Key view and not from KEYGUPD or FTRGUPD.

Use a calculated data field to tailor the information from the data record. To use a calculated field in a report, choose **Field - Insert New Field - Calculation Field**. A dialog appears, prompting you to name the newly calculated field.

The Field Name dialog is followed by a dialog that allows you to construct an expression that performs the calculation. It can be built from existing data fields, functions, and operators. The following example constructs a field that contains “Last Name, First Name”.

Note that the TRIM function is used to remove extra spaces and the “+” operator is used to concatenate the two fields. You can type the expression directly in the box or you can select the fields (from the **Data Field** or **System Field** buttons), the functions, and the operators. The expression will be built as the pieces are selected.

Note that some functions apply to text fields and some functions apply to numeric fields. The Select Data Field list shows whether a field is numeric or text. In general, functions should not be applied to the System fields.

Figure 83
Select Data Field dialog

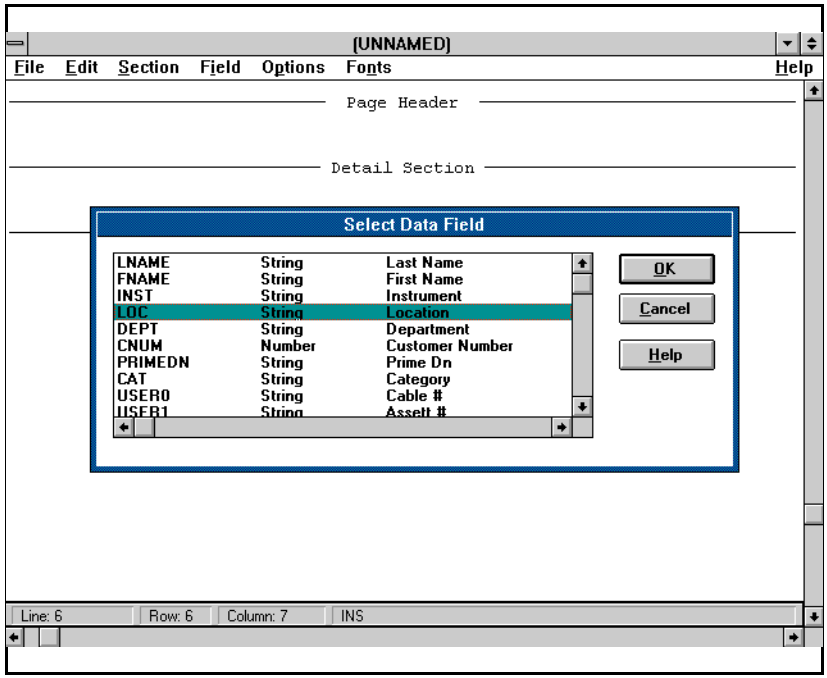
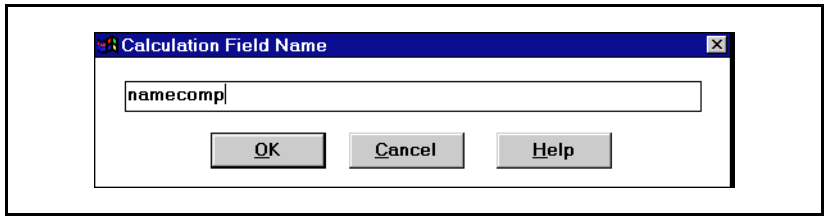


Figure 84
Naming a Calculation field



After the detail section has been specified, you can design the Page Header section. The text for the column labels can be placed over the appropriate data. The Page Header section often uses the System data fields: page number, system name, date, and time. Choose **Field - Insert New Field - System Field** to select one of these data fields.

Figure 85
Defining a Calculation field

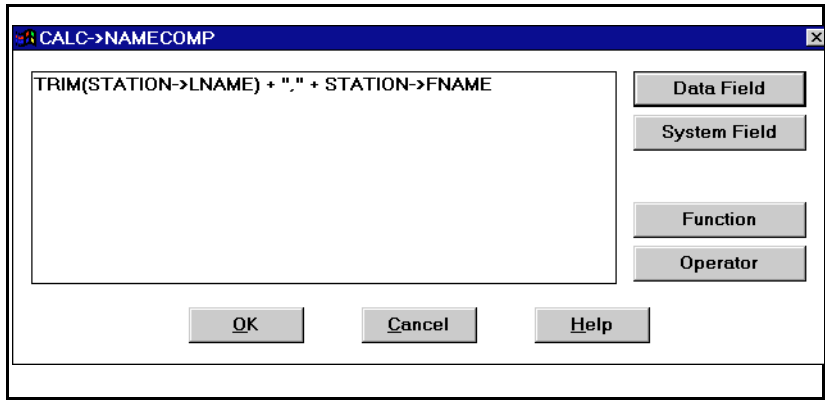
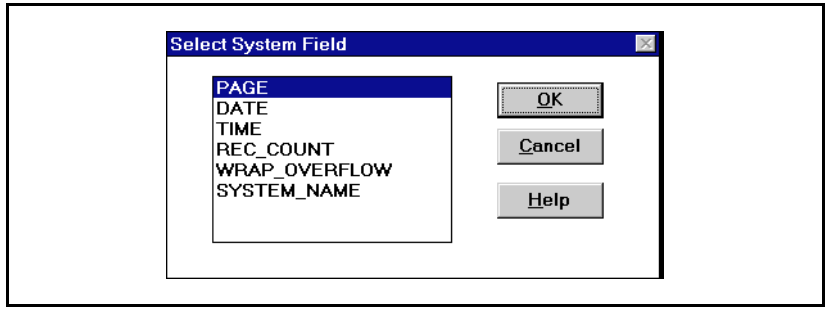


Figure 86
System Field list



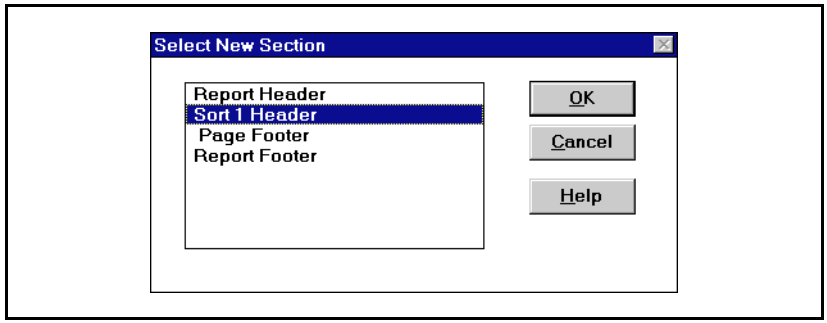
The Page, Date, Time, and System_Name fields are commonly used in the Page Header section. We will discuss the other system fields in later in the section titled “Some Special Techniques”.

Decide if the report lines should be sorted

Many reports require the data to be sorted. Since there is no sort information on a new report form, choose **Section - New Section** and select Sort 1 Header from the dialog. This will add a sort section to the report.

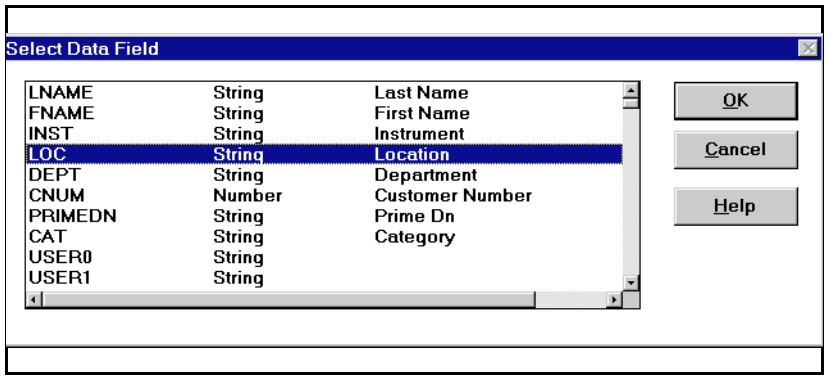
The first sort section specifies the data field that provides the primary ordering of the data. The data value to use for sorting will be selected from the list of data fields.

Figure 87
Select New Section



Other sort sections will be applied only to provide secondary order levels within the primary ordering. To order a report by alphabetizing the names of people in a department, the report should use Department for Sort 1 Header, LastName for Sort 2 Header, and FirstName for Sort 3 Header.

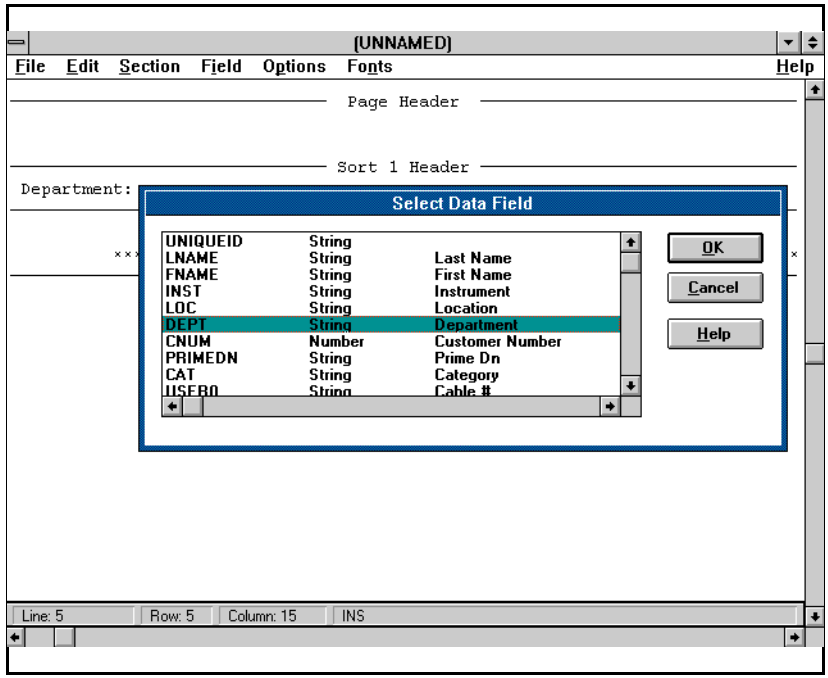
Figure 88
Select Data Field



To modify a Sort Header after it has been specified, choose **Section - Sort Field**. (It will only be available if the cursor is positioned in a Sort Header.) From this dialog, the **Sort Field** button again displays the familiar list of data fields.

Summary information can be specified in the Sort Fields, as well. On a report sorted by department, it is possible to print each department name once, by specifying the Department field in the Sort Header section (and not in the Detail section).

Figure 89
Adding summary information in the Sort Header section



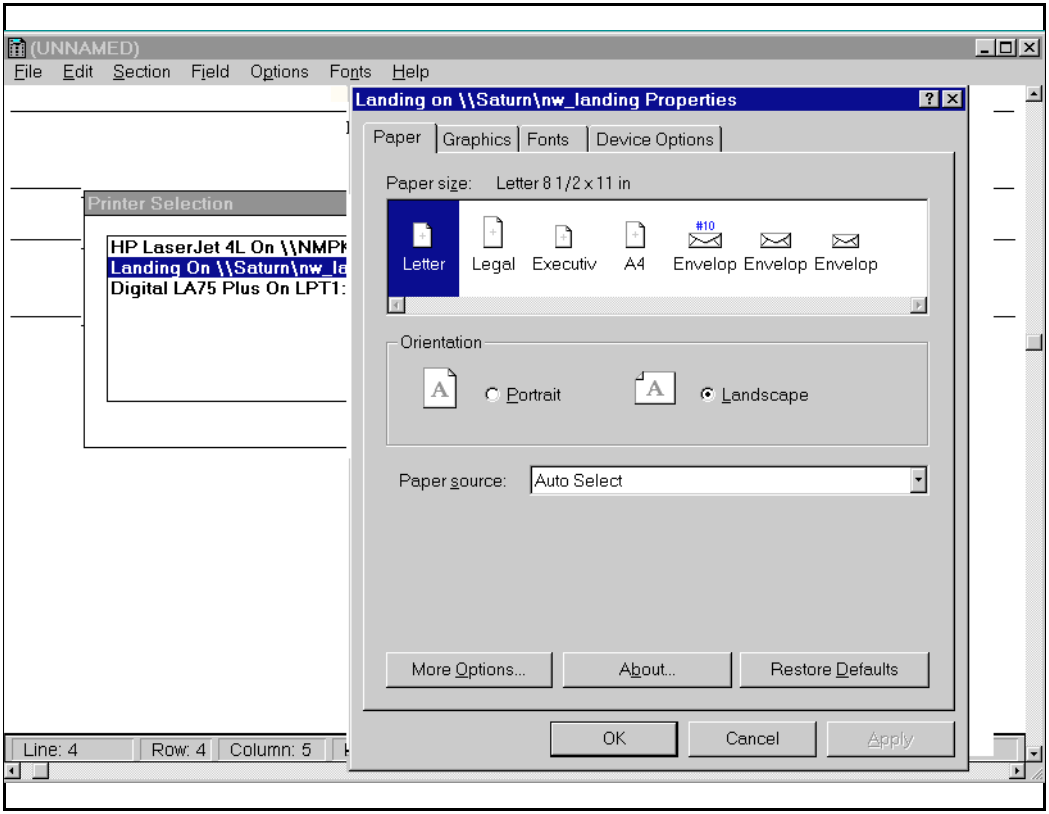
The Sort Header section will print only when the Sort Header's field value changes. It uses the data field on the first record in the new sort group. Typically, the data field chosen to print in the Sort Header should be the same field on which the data are being sorted.

Specify any special printer considerations for this report

The Report Generator allows each report form to contain special printer information. Some reports might be designed to print in landscape mode, while others should print in portrait mode. Some reports might require a special printer, an impact printer with special forms, for example.

Choose **File - Printer Setup** to select a printer and the **Setup** button to specify special information about the printer.

Figure 90
Selecting a printer



This information is stored with the form so that it applies each time the report is printed. When the Report Generator actually builds the report from the form and the data, you can override this printer information.

Apply the finishing touches

The Form Editor provides some additional capabilities to tailor the report. As you examine the almost complete report, you might wish to modify the appearance of the report.

Lengthening and Shortening Data Fields

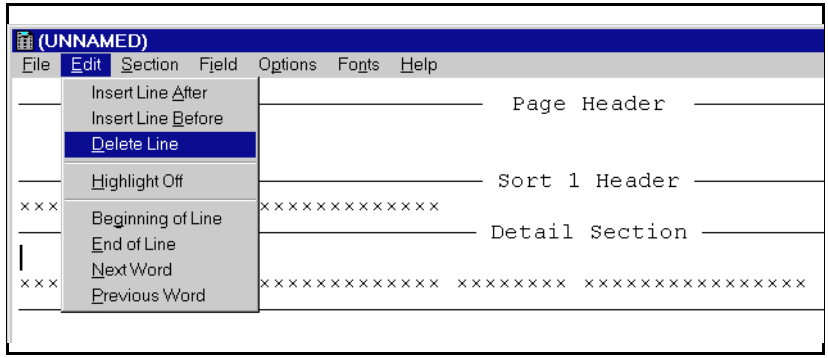
You can adjust the width of the data fields in the report. The area for each data field is marked on the form with the small letter 'x'. The data will be printed in that marked area. If the actual data are longer, they will be truncated to fit in the area; if they are shorter, the rest of the marked area will be filled with blanks. In the example report, you must lengthen the area set aside for the calculated field which holds the name. You might want to shorten a field in order to try to squeeze another field onto the report.

To adjust the width of a data field, place the cursor in the marked area. To shorten the field, press <Delete> or <Backspace>. To widen the field, press any other key. It will appear on the form as the small letter 'x'.

Adding and Deleting Blank Lines

The Form Editor allows you to add and delete blank lines on the report. On a new form, the data in the Detail section is, by default, double spaced. To make a single-space report, position the cursor on the extra blank line and choose **Edit - Delete Line**.

Figure 91
Deleting a blank line from the Detail section



Other items in the **Edit** menu allow you to insert blank lines either above or below the line on which the cursor currently rests.

Report Parameters

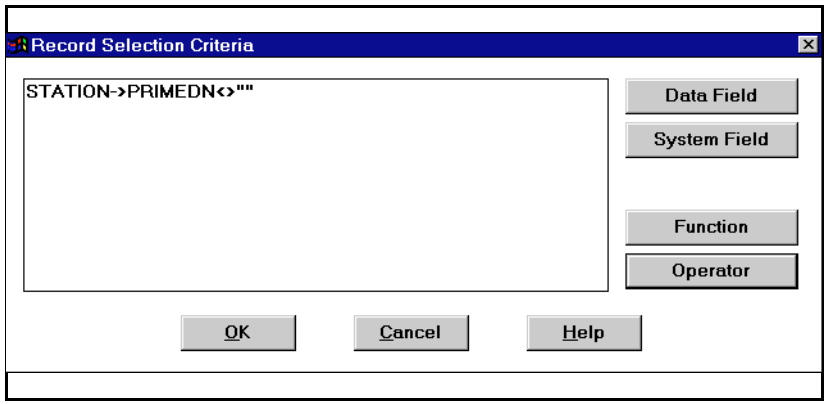
There are a few more options available to complete the report. Choose **Options - Report Parameters** to specify the name of the report as it will appear in the list of available reports. It also allows you to specify margins and other report -wide options.

The Print Trial Records is used for reports that require that the paper be correctly aligned in the printer. It has no effect until you send the report to the printer. At that time, the Report Generator will ask whether it should print a Trial Report. The Trial Report contains the Header and Footer sections and a single line from the Detail Section. Each data field is replaced with a string of the letter 'X' of the appropriate length. You will be asked to print the Trial Report until you click **No**. This allows you to adjust the paper in the printer until it is properly aligned. Then the full report can be printed.

Report Filter

The Report Filter selects which records are to be included in the report. Choosing **Options - Report Filter** displays the Record Selection Criteria dialog. This dialog helps you to build an expression, typically from the data fields. As the Report Generator reads each record in the database, it evaluates the expression. When the expression is true, the record will be included in the report.

Figure 92
Specifying the records to be included in the report



The Record Selection Criteria dialog operates very much like the Calculation Field dialog. However, you should build an expression, usually including a comparison operator (=, >, <, <>). In the example, we are selecting all records for which there is a PrimeDN. The expression tests whether the PrimeDN field is not equal (<>) to blank (“ “).

Modifying fields

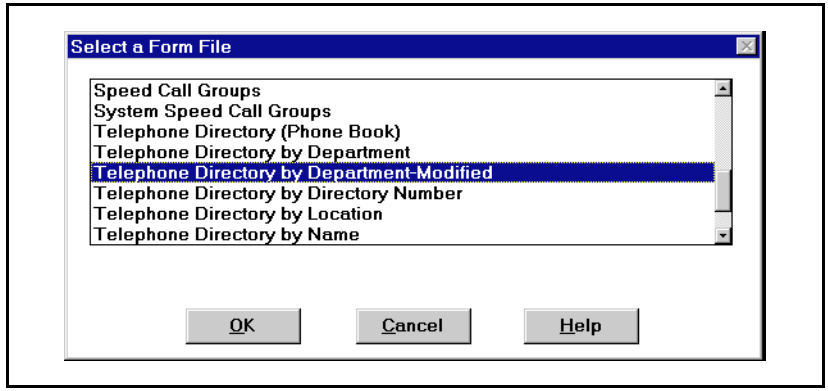
As part of the final tuning, you might want to specify more exactly how the fields are to be displayed. Choose **Field - Edit Current Field**.

The Alignment options operate within the area of the data field, marked by the letter 'x'. The Wrap options should apply when the field will not fit in the area allowed. The section on “Some Special Techniques” discusses how to wrap text. Similar display options, like whether to use commas, control the printing of numeric fields.

Save the report and test the results

With the initial specification of the form complete, it is time to save the form and test it with the data from the system. Choose **File - Save** or **File - Save As** to save the form. Choosing **File - Exit** returns control to the Report Generator. To test the form, choose **Report - Run Report** to select the report form you wish to run.

Figure 93
Choosing the example form



The Select a Form File list uses the report names specified in the Form Editor's Option/Report Parameters dialog. If you did not specify a name for a new form, this list will display the file name. If you modified an existing form and saved it with a new file name but did not change the Report Name, that Report Name will appear twice. (You should go back into the Form Editor to give your modified report a new Report Name.)

As you run the report, you might find that you wish to modify the form. From the Report Generator choose **Form - Open Existing Report Format** to return to the Form Editor and modify the form.

Some Special Techniques

The following are a few special techniques available in the Form Editor to help you customize your reports:

Sort Header section /Break Field

If the cursor is placed in a Sort Header section, the **Section - Break Field** menu item is enabled. The Break Field is a data field that causes the Sort Header section and the Sort Footer section to print. By default (and almost always) the Break Field is the same as the Sort Field that was specified when the Sort Header section was created.

Word Wrap

If the data field will not fit in the area allowed for it on the form, you can specify that the field should wrap. By default, data which will not fit in the allotted space will be truncated. Wrapping is especially useful for a field like ADN (the list of all Directory Numbers assigned to a station), which can be either quite long or quite short.

Wrapping the data field requires two steps:

1 Mark the field as one that should be wrapped using the Field/Edit Current Field dialog. (Wrapping only applies to text fields.) Choose the Wrap Text box to cause the field to wrap at a word.

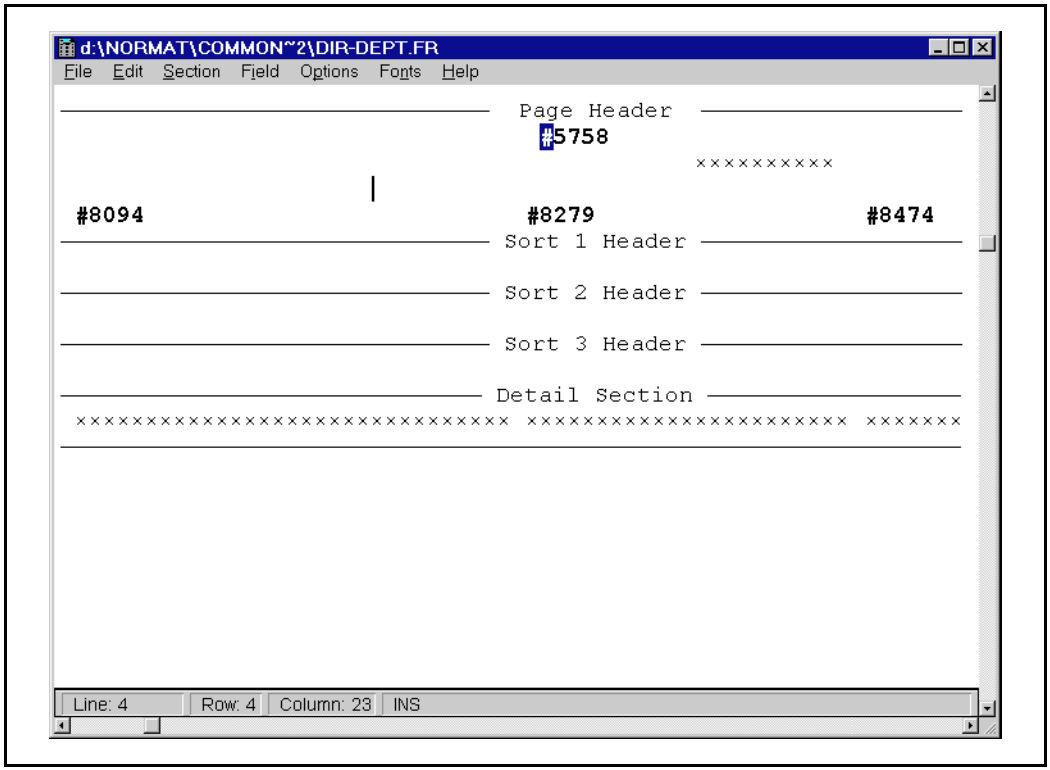
2 Specify where to position the wrapped portion of the field. Position the cursor directly below the field that is to be wrapped and choose **Field - Insert New Field - System Field**.

You can include several overflow areas directly below each other. If you wish to include the line for the overflow only if it is needed, choose **Section - Edit Current Section**. This dialog includes an option to Suppress Blank Lines that will only print the line with the Wrap_Overflow field if it is used.

Modifying a standard report

If you choose to modify one of the standard reports distributed with MAT, you will notice that there are numbers in the headers, instead of text. These numbers allow the reports to translate automatically to another language.

Figure 94
Example Report



To see the actual text within the Form Editor, position the cursor on the octothorp character (#) and choose **Field - View Field Translation**. A box will display the text that will appear on the printed report.

A quick description of some section types not used in the example

Sort Footer Section: Data fields placed in the Sort Footer section can be used like summary data in the Sort Header section. The fields in the Sort Footer section are only printed if the value changes (except that it prints after the detail lines). In addition, Sort Footer data can contain totals and other summary statistics. After placing a data field in the Sort Footer, you are prompted with a list that contains Value (to print the value from the last record in the group) or various summary statistics (include Total, Average, Count, Max, Min). These summary statistics also can be specified by choosing **Field - Edit Current Field** in the Footer Field box.

Report Header, Report Footer: These sections can be used to specify data that should print only once at the beginning or the end of the report.

Power User Tool

The standard MAT Station Administration window allows you to easily add or modify a few stations at a time. However, creating or maintaining large groups of stations quickly (as when establishing a new system) is better handled using the Power User tool.

The Power User Forms window minimizes the actions required to add a station, eliminates up-front configuration of line cards and numbering plan, and allows you to create specialized installation *forms* that include only the station fields that you decide you need to configure stations.

> ***Note:*** At any time while using the Forms window, you can press <F1> for on-line reference information on the current field.

Concepts for the Power User tool

The concepts of *forms*, *templates*, and *filters* are important to understand before using the Power User tool.

Forms and templates

A *form* (a file that you can design) acts as a *filter* to determine which fields (of the hundreds possible) are displayed in the Power User Forms window for you to edit. When it's time to use the form, you fill in the station values as needed for the first station, save them, and move to the form for the next station in the group that you are adding. You create a form file (a list of only those station-definition fields you wish to see in the order in which you want to see them) using the Forms Editor.

A *template* places default values in some of these fields to save you the repetitive task of adding the same value to station after station. You create a template file (a partially filled-in station) using the template view in the Station Administration module.

Note: The function of templates is identical in the standard Graphical User Interface and the Forms Interface.

This means that a form, used in conjunction with a template, provides you with a station-definition window including only those fields that you wish to edit, and with many fields already configured by the template with values of your choosing.

To lessen clutter on the screen, the fields configured by the template are not displayed. This means that you work with only those fields which must be "personalized" for this station. You do not waste time moving through already-configured fields.

You view and edit these station-configuration fields in the Forms Interface window.

Filters

There are hundreds of fields for a station, yet you are probably interested in only a few. The Form File that you define acts as a filter to allow only the fields of interest to appear in the forms interface station definition window.

MAT automatically performs a second filtering to determine which of the station fields defined in the Form File actually apply to the current station. This *applicability* filter is based upon Meridian 1 system data (X11 software release, option packages, customer options) and the type of the current station.

There are two important benefits to this applicability filter, as follows:

- Form files are independent of systems, and, therefore, X11 software release, options packages, and customer options

  For example, a form file might contain fields that apply to release 20, but not to release 19. You can safely use this form with release 19 systems, since the release 20 fields will not be displayed.

- Form Files are independent of station types

  A single Form File can include both single line FTR's and multi-line keys. If the form is used to display a single line station, then the FTR'S (but not the keys) are displayed. If the same form is used to display a multi-line station, then the keys (but not the FTR's) are displayed.

Using the power user Forms interface

You use the Forms interface to add one or many stations to a system, as described in this section. “Designing forms and templates using the forms editor” on page 251 describes the process of creating forms and templates.

Forms interface window buttons

The following buttons appear at the top of the Forms interface window:

- **OK**: (Single station adds only) Saves the current station and closes the window.
- **Next**: (Multiple station adds only) Saves the current station, and opens the next blank station form.
- **Previous**: (Multiple station adds only) Saves the current station and opens the previously-created station.
- **Cancel**: Cancels any changes to the current station and closes the window. Any stations created before the current station while using this form are still in place.
- **Validate**: Validates all current station values.
- **Print**: Prints a a short form for the current station. This printout shows all values in the station, not just those on the form. (This is a quick way for you to check the value of a field not on the form.)
- **Help**: Opens Windows Help.

Forms interface message bar

The message bar at the bottom of the window has two panels. The left panel provides a description of the current field. The right panel displays hint text for the current field. For example, the hot keys to invoke the DN and TN lists where appropriate.

Keyboard shortcuts

In the procedures that follow, keyboard shortcuts are shown in brackets.

Adding a single station or template

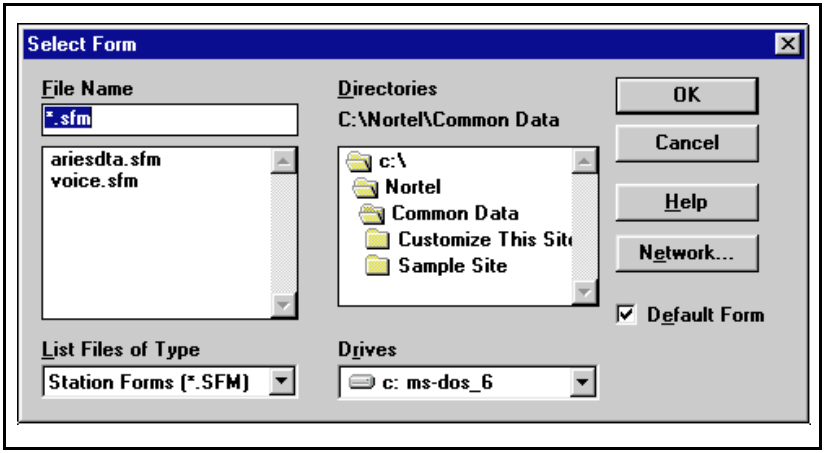
1 Choose **Forms - Forms Interface**. <INS>

This is a toggled menu item. Clicking it places a checkmark next to the name (selects it), and clicking again removes the checkmark (deselects it).

2 Choose **Forms - Select Form**. <Alt>O-S

The Select Form dialog appears. This is a standard Windows file open dialog.

Figure 95
Select Form dialog



MAT provides the following example forms for you to use in creating forms that meet your needs:

- ARIESDTA.SFM: designed for M2xxx and M3xxx data stations
- VOICE.SFM: designed for all types of voice stations (single and multi-line)
- Default form: A general-purpose form that includes most station fields. This is a good starting point for a form with many fields. You choose to use this form by selecting the Default Form check box.

3 Select the form from the list box or select the Default Form check box. Click **OK**.

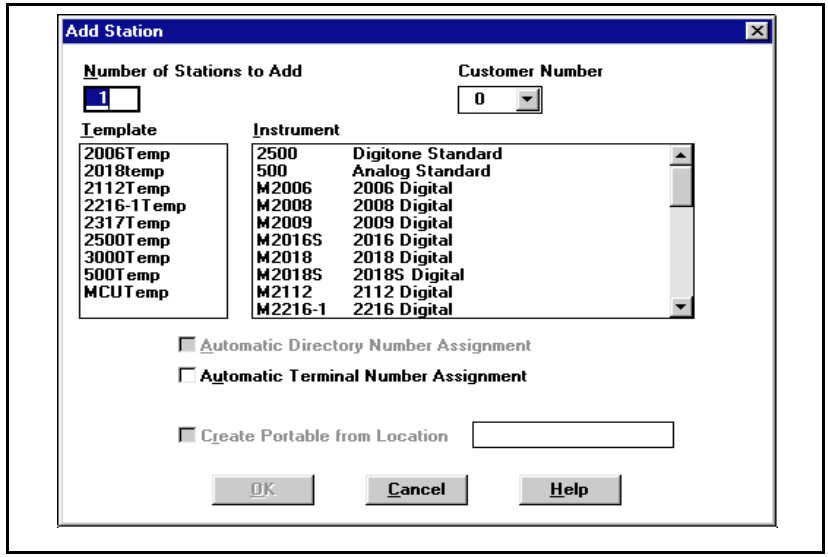
4 Choose **View - Station** to add a station or select Template to add a template. <Alt>V-S

The existing stations (or templates) for the system appear in the MAT Station Administration window.

5 Choose **Edit - Add**. <Ins>

The Add Station dialog (or Add Template dialog) appears.

Figure 96
Add station dialog



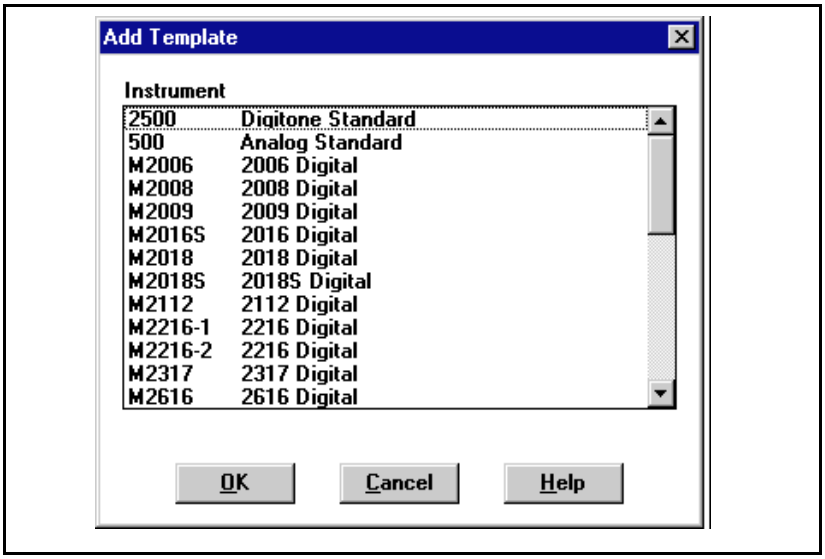
6 If you are adding stations, follow these steps:

- Enter “1” in the Number of Stations to Add field.
- Select the Customer Number in the pull-down box.
- Choose a template or instrument.

  If you choose a template, some fields will be filled in with the default values that you chose when designing the template.
- Click the check boxes to automatically assign DN or TN, as desired.

7 If you are adding a template, select a template from the list.

Figure 97
Add Template dialog



8 Click **OK** to open the Forms Interface window.

The single station add form appears.

9 Fill in the fields as described in “Station fields” on page 241.

10 When you have entered all desired values, click **OK**.

This saves the station and closes the forms interface window.

11 For stations: If MAT is in Maintenance mode, the synchronization dialog appears. Fill in the dialog in the same way as with the standard interface. Click **OK**.

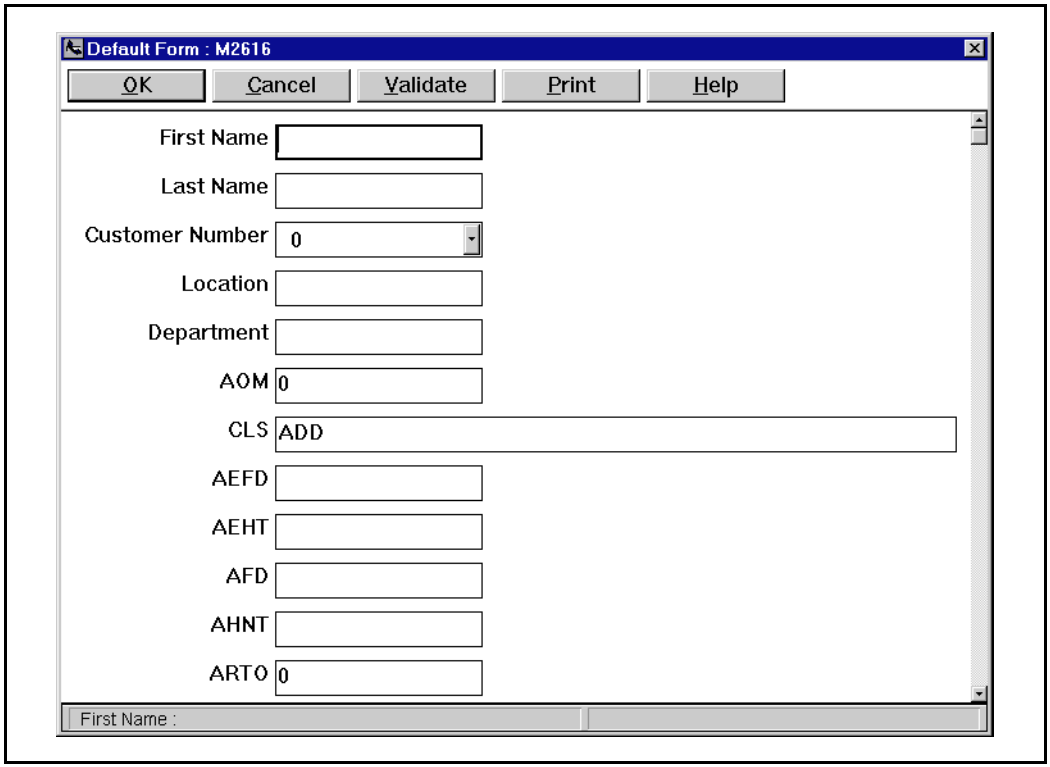
To invoke synchronization manually if you are in Installation mode, use the **Synch** menu.

Updating a single station (or template)

1 Choose **Forms - Forms Interface**. <Alt>O-F

This is a toggled menu item. Clicking it places a checkmark next to the name (selects it), and clicking again removes the checkmark (deselects it).

Figure 98
Single station add form



2 Choose **View - Station**. <Alt>V-S

(To modify a template, select Template. <Alt>V-T

The existing stations (or templates) for the system appear in the MAT Station Administration window.

3 In the MAT Station Administration window, double-click the station (or template) of interest.

The single station add form (or the template add form) appears.

4 Modify the fields as needed.

5 Click **OK**.

6 For stations: If MAT is in Maintenance mode, the synchronization dialog appears. Fill in the dialog in the same way as with the standard interface. Click **OK**.

To invoke synchronization manually if you are in Installation mode, use the **Synch** menu.

Adding multiple stations

1 Choose **Forms - Forms Interface**. <Alt>O-F

This is a toggled menu item. Clicking it places a checkmark next to the name (selects it), and clicking again removes the checkmark (deselects it).

2 Choose **Forms - Select Form**. <Alt>O-S

The Select Form dialog appears. This is a standard Windows file open dialog. See Figure 95.

MAT provides the following pre-defined forms:

- ARIESDTA.SFM: designed for M2xxx and M3xxx data stations
- VOICE.SFM: designed for all types of voice stations (single and multi-line)
- Default form: A general-purpose form that includes all station fields. This is a good starting point for a form with many fields. You choose to use this form by selecting the Default Form check box.

Note: MAT provides these pre-defined forms as starting points for your own special-purpose forms. You can create forms that include just the fields you need, and templates that set values that you define. See “Creating a new form” on page 251 and “Editing an existing form” on page 252.

3 Select the form from the list box or select the Default Form check box. Click **OK**.

4 Choose **View - Station**. <Alt>V-S

The existing stations for the system appear in the MAT Station Administration window.

5 Choose **Edit - Add**. <Ins>

The Add Station dialog appears.

6 Enter the number of stations that you wish to add.

7 Select the Customer Number in the pull-down box.

8 Choose a template or instrument.

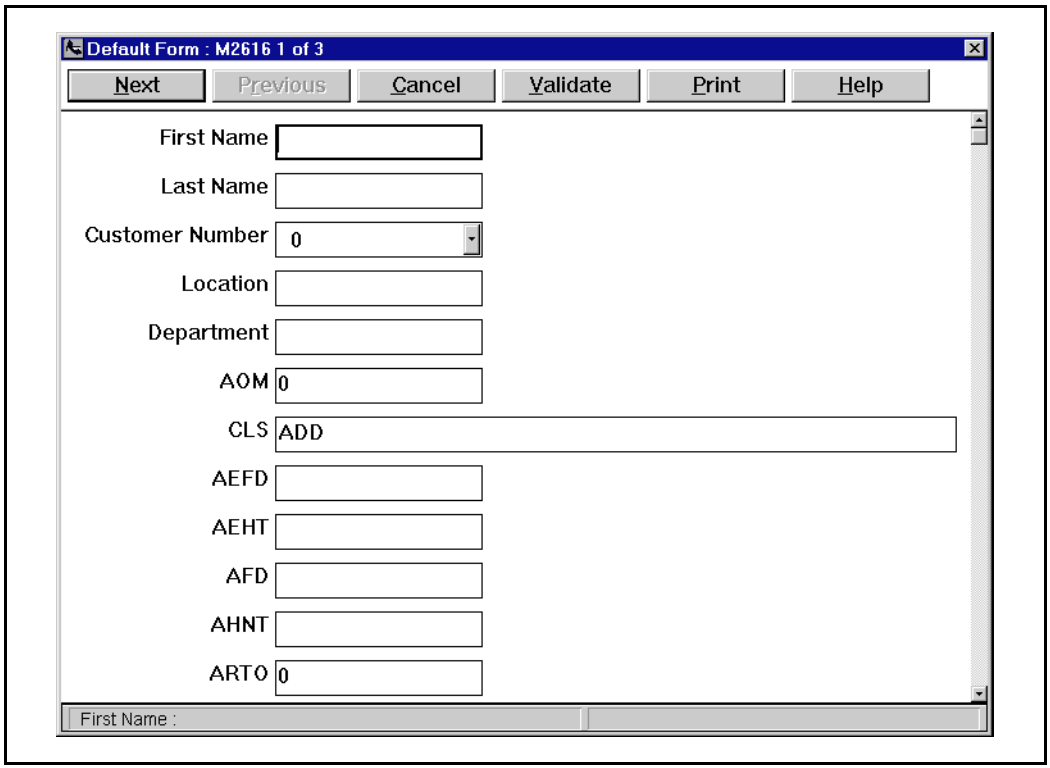
If you choose a template, some fields will be filled in with the default values that you chose when designing the template.

9 Click the check boxes to automatically assign DN or TN, as desired.

10 Click **OK** to open the Forms Interface window.

The multiple station add form appears.

Figure 99
Multiple station add form (default form)



11 Fill in the fields as described in “Station fields” on page 241.

12 When you have entered all desired values, Click **Next**.

This saves the station and opens the next blank station form. The **Next** button changes to a **Finish** button while you edit the last station in the group. The **Finish** button saves the station and closes the forms interface window.

13 If MAT is in Maintenance mode, the synchronization dialog appears. Fill in the dialog in the same way as with the standard interface. Click **OK**.

To invoke synchronization manually if you are in Installation mode, use the **Synch** menu.

Validating station data

You can validate by field or by station, same as the standard interface. In addition, you have the option to relax numbering plan and hardware validations to ease the process of adding multiple stations at one time.

Field validation

The current field is automatically validated when you move to another field. If the validation fails, an error message appears, and the focus returns to the erroneous field.

Station validation

In the Forms Interface window, click **Validate** to validate all values for the station. This performs the same operation as when you choose **File - Validation**.

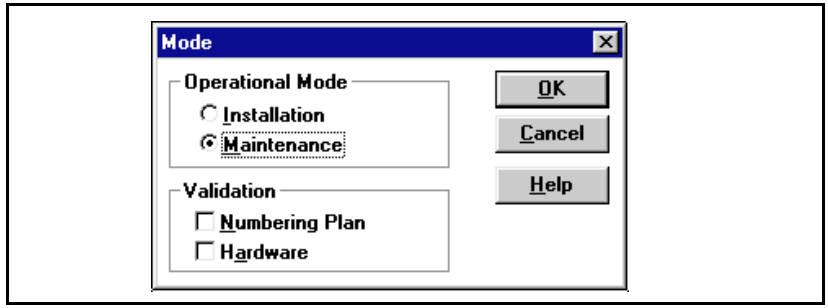
Validating the numbering plan and hardware

You can relax the numbering plan and hardware validations as follows:

- Turn off numbering plan validation. This allows you to assign a DN not defined in the numbering plan, without generating an error.
- Turn off hardware validation. This allows you to assign a TN for which there is no corresponding circuit card, without generating an error.

Note: These validation settings affect both the forms interface and the standard interface.

Figure 100
Mode dialog



Station fields

This section provides detail on the station fields that you fill in using the Forms Interface.

On-line Help

At any time while using the Forms window, you can press <F1> for on-line reference information on the current field.

Types of Station field

The following basic types of station fields can appear in the Forms Interface:

- Class of service
- Mutli-line keys
- Single line FTR's
- Prompts: These are all fields which do not fall into one of the above categories (for examples, TN, NCOS, and TGAR)

Class of service field

The Class of service control appears as a CLS text box which can contain multiple values (the approach taken by overlays 10 and 11). Enter all CLS mnemonics for this station in the CLS text box.

You can enter multiple mnemonics for the same class of service in the CLS text box (for example, CFXA and CFXD). In this case, whichever mnemonic appears last (furthest to the right) takes precedence. This is consistent with the operation of overlays 10 and 11.

The values of some Class of service fields might not be visible on the form when it appears. Instead, the form shows only those classes of service which are not equal to default values. You can modify this partial configuration by adding new mnemonics or changing existing ones.

Press <Fl> while within any class of service field for a complete list of class of service mnemonics in Windows Help format.

Printing the class of service configuration

The **Print** button on the form window allows you to print a short form which shows the complete class of service configuration.

Mutli-line keys

Keys for multi-line stations appear as drop-down boxes containing all key mnemonics. As you move through the list of mnemonics, the key description appears in the message bar at the bottom of the window. Additional parameter controls appear automatically if a mnemonic requires them (and for FTRs set to **Yes**).

You can also type a mnemonic directly into the box. MAT tracks your typing and automatically enters the first matching key (and any associated parameter controls).

Alternately, type the first letter of the mnemonic, followed by the down arrow key. The selection moves to the mnemonic starting with that letter. Press the down arrow key again to scroll down the list starting at that point.

Single line FTR's

FTRs appear as drop-down boxes containing the choices **Yes** and **No**. You can also type directly into the box. Additional parameter fields appear automatically if you set an FTR to **Yes**. When you move the cursor into a parameter field, the parameter description appears in the message bar at the bottom of the window.

Prompts

Prompt fields appear as either drop-down lists or as edit boxes, depending on the type of the field. Fields with a small number of predefined values appear as drop-down lists (for example, FCAR and DTR). Numeric fields and other fields with a wide range of possible values appear as edit boxes (for example, DES and FDN).

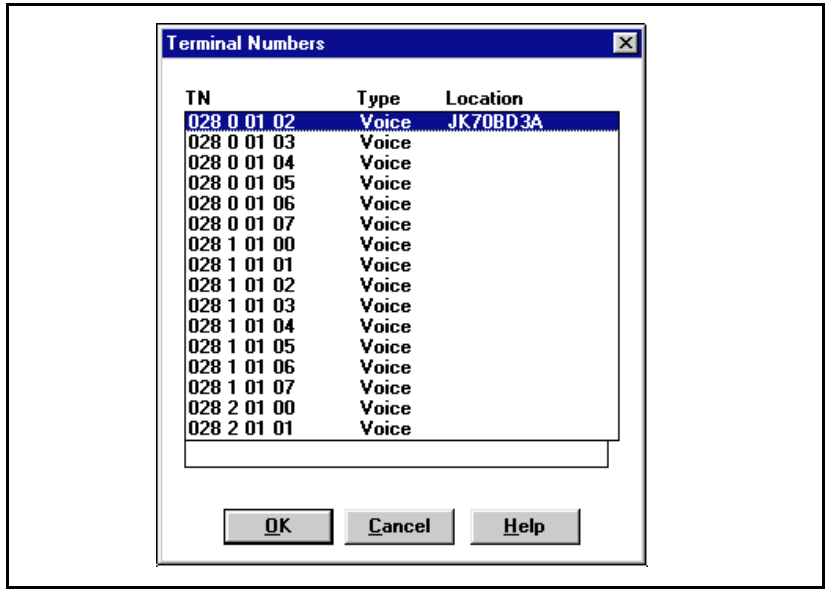
DN and TN fields

DN and TN fields allow you to use lists of values to fill in the fields. In addition, extra fields appear as needed to allow you to enter parameter values.

TN fields

When you edit a fields with a TN type value, press <Ctrl>T (or double-click in the field) for a list of TNs compatible with the current station type.

Figure 101
TN value list



DN fields

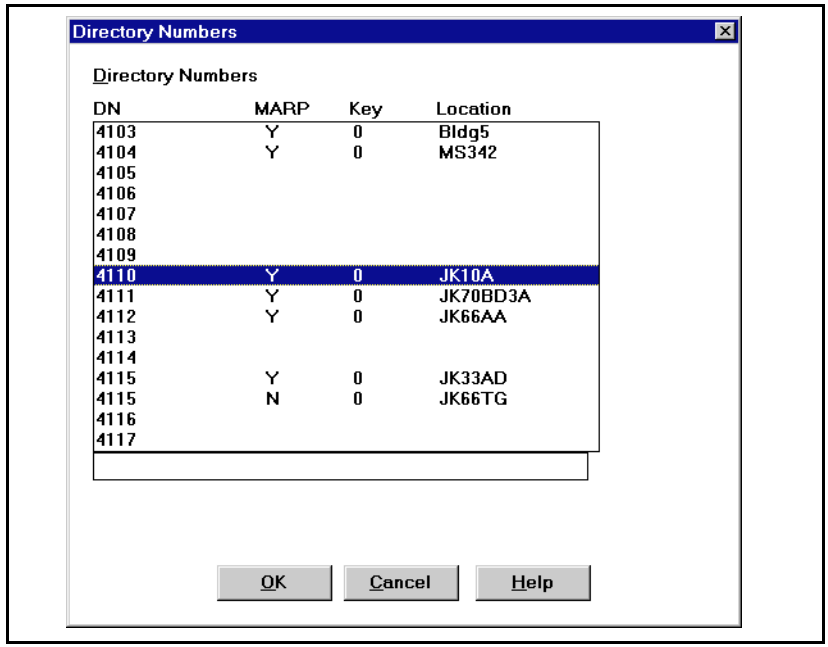
In addition to station fields, you need to modify fields that are not directly associated with the current station, but which are associated with DNs that appear on the station. You can use the following DN fields in the forms interface:

- MARP
- CPND
- VMB

Note: DN data is applicable to stations only, not templates. Therefore, the MARP, CPND, and VMB controls described below appear only on a form when operating on stations. Templates do not actually have DNs. Even if a template is configured with a fully specified DN, no DN record will be added to the database until a station is created using the template. Therefore, at the time a template is created, there is no way to store any DN data.

Press <Ctrl> D while in a DN field (or double-click in the field) for a list of DNs. In the standard interface, MARP, CPND, and VMB appear as buttons on the DN list dialog. In the forms interface, MARP, CPND, and VMB appear as fields on the main form.

Figure 102
DN value list



MARP

The MARP drop-down list appears below the DN field with which it is associated. Multiple appearance DNs can have values of **Yes** or **No**. Single appearance DNs can have a value of **Yes**. The MARP field appears below the DN field of a single-line station and below the following multi-line keys:

- MCN
- MCR
- PVN
- PVR
- SCN
- SCR
- HOT_L_2WAY
- HOT_D_2WAY

Note: The following Meridian 1 releases do not support MARP, therefore MARP does not appear on their forms:

- North American releases 14 and 17
- International release 16.9X G

CPND

The CPND name field is a single drop-down list (additional fields appear to the right if you choose a CPND value that requires them). See Figure 103. A CPND field appears below the DN field of a single line station, as well as below the following multi-line keys:

- MCN
- MCR
- SCN
- SCR.

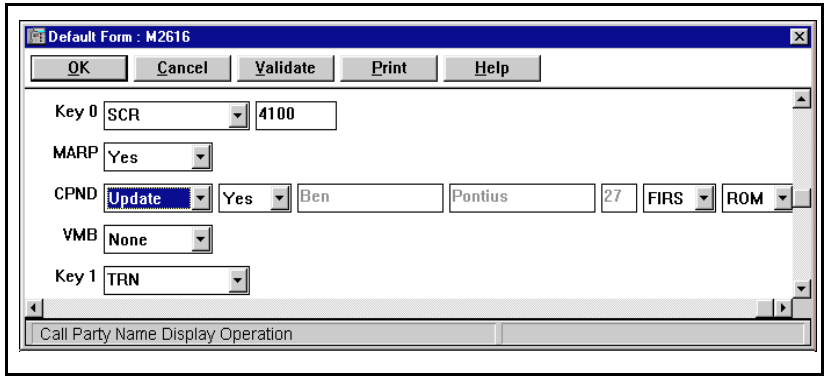
You can choose one of the following values from the drop-down list:

- **None**: Performs no CPND operation
- **Add**: Creates a new CPND name (appears only if no name exists yet for the DN)
- **Delete**: Removes an existing CPND name
- **Update**: Modifies an existing CPND name

CPND Parameter Fields

As you move the cursor into a parameter field, the parameter description appears in the message bar at the bottom of the window. The following parameter fields appear to the right of the CPND field when you choose a value other than **None**:

Figure 103
CPND parameter fields



- Get from location: drop-down list containing **Yes** and **No**
- First name: text box
- Last name: text box
- Expected length: text box. This field is only added if the name has Synch Status **NEW**, and static allocation is enabled in the CPND Administration module.
- Format: drop-down list containing **FIRS** and **LAST**
- Language: drop-down list containing **ROM** and **KAT**. This field appears only if package 211 (Multi-language CPND) is enabled for the system.

Some additional attributes of the name controls follow:

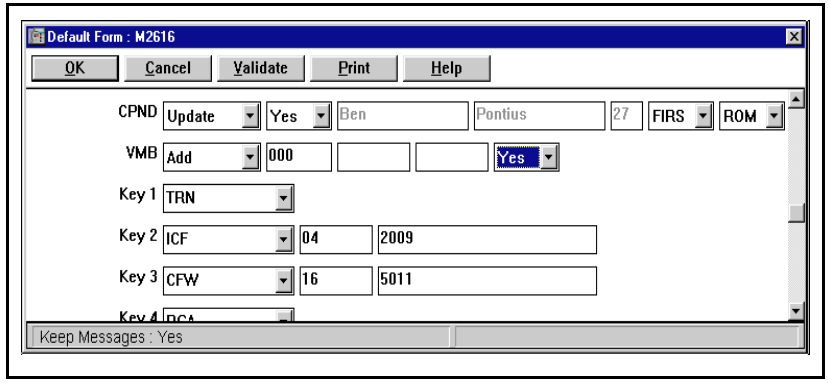
- If the Get From Location field is **Yes**, then the First Name and Last Name controls are dimmed and disabled, and contain the name from the First Name and Last Name fields of the station.
- If the operation is **Delete**, then the additional name controls are dimmed and disabled. This allows you to view the name which is to be deleted, but not to modify it.

  Note: CPND depends on package 95 (Call Party Name Display). If package 95 is not enabled for a Meridian 1 system, the CPND field will not appear on the form.

VMB

VMB appears initially as a drop-down list (additional fields appear as needed).

Figure 104
VMB fields



A VMB appears below the DN field of a single line station, and below the following multi-line keys:

- MCN
- MCR
- SCN
- SCR

The drop-down list contains the VMB operation to be performed, and allows the following values:

- **None**: Perform no VMB operation
- **Add**: Create a new VMB (appears only if no VMB exists yet for the DN)
- **Delete**: Remove an existing VMB (appears only if a VMB does exist)
- **Update**: Modify an existing VMB (appears only if a VMB does exist)

If you select an operation other than **None**, then additional fields appear to the right of the VMB field. The additional fields are listed below in the order in which they will appear from left to right.

- Class of service (text edit field)
- Second DN (text edit field)
- Third DN (text edit field)
- Keep messages (drop-down list containing **No** and **Yes**). This control is only added if the voice mailbox has Synch Status **NEW**.

As you select a VMB field, the description appears in the message bar at the bottom of the window. Additional parameter fields appear automatically if a VMB requires them.

If the VMB operation is **Delete**, then the additional fields are dimmed. This allows you to view the VMB which is to be deleted, but not to modify it.

> ***Note:*** VMB depends on package 246 (Voice Mailbox Administration). If this package is not enabled for a Meridian 1 system, then the VMB fields do not appear on the form.

Designing forms and templates using the forms editor

The MAT application assumes that station Form Files are located in the Common Data subdirectory, using a ".SFM" file extension. You can, however, place these form files anywhere you wish.

MAT provides the following pre-defined forms:

- ARIESDTA.SFM: designed for M2xxx and M3xxx data stations
- VOICE.SFM: designed for all types of voice stations (single and multi-line)
- Default form: A general-purpose form that includes most station fields. This is a good starting point for a form with many fields. Instead of selecting this form in the file-selection box, you select this form by selecting the Default Form check box.

Creating a new form

To create a form, perform the following steps:

1 Choose **Forms - Forms Interface**. <Alt>O-F

2 Choose **Forms - Edit Custom Form**. <Alt>O-E

The FormEdit dialog appears.

3 Choose **File - New** to open a new form.<Alt>F-N

The FormEdit window appears with no fields in the Form Fields list.

4 From the Available Fields list, select the first field you wish to include in the form, and click **Add**.

The field moves to the Form Fields list.

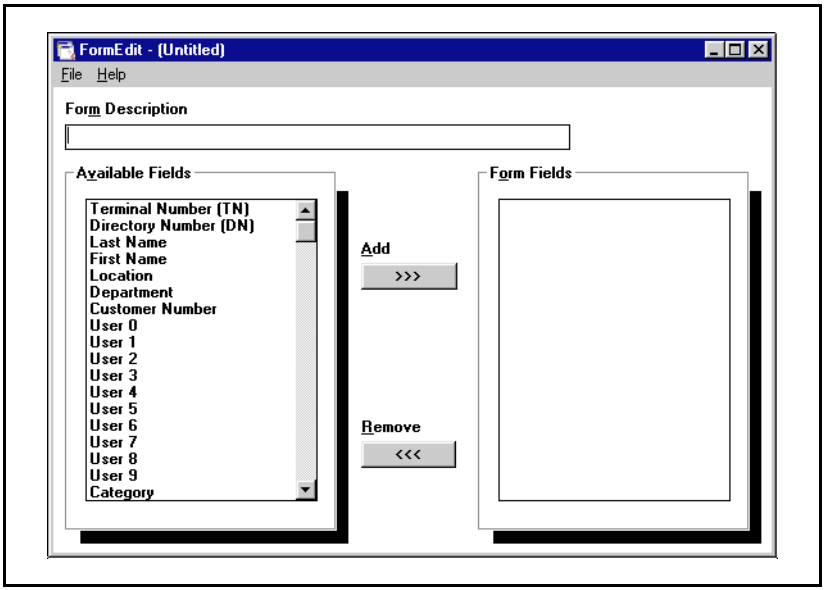
Alternately, you can select one or several fields to drag from the Available Fields list to the Form Fields list.

5 Move all the desired fields to the Form Fields list.

To change the order of the fields, click and drag items up or down in the list.

To remove an item from the list, click and drag from the Form Fields list to the Available Fields list, or select the item and click **Remove**.

Figure 105
FormEdit window for a new form



6 When the Form Fields includes all the desired fields in the correct order, type a descriptive phrase in the Form Description text box.

This is a phrase to help you remember the form's usage, not the filename.

7 Choose **File - Save** to save the form file. <Alt>F-S

The Save As window appears, allowing you to name the new form. Enter a filename and click **OK**.

Alternately, to exit the forms editor without saving the form, choose **File - Close**. A warning box prompts whether you wish to save the changes before exiting the editor.

Editing an existing form

To edit an existing form, follow these steps:

1 Choose **Forms - Forms Interface**. <Alt>O-F

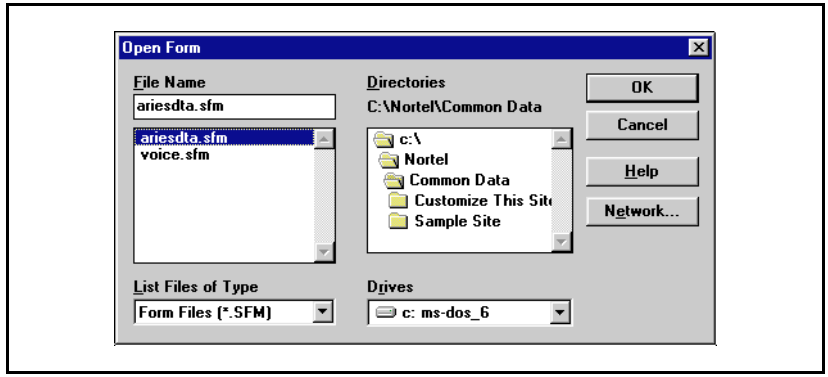
2 Choose **Forms - Edit Custom Form**. <Alt>O-E

The FormEdit dialog appears.

3 Choose **File - Open** to install a form. <Alt>F-O

The Select Form dialog appears.

Figure 106
Select Form dialog



MAT provides the following pre-defined forms:

- ARIESDTA.SFM: designed for M2xxx and M3xxx data stations
- VOICE.SFM: designed for all types of voice stations (single and multi-line)
- Default form: A general-purpose form that includes most station fields. This is a good starting point for a form with many fields. You choose to use this form by selecting the Default Form check box.

Note: The sample forms provided with MAT are a good starting point for many forms you might create. Be sure to rename the form when you save it, however. Subsequent versions of MAT will use the same default filenames, so any files you create using the default file names will be overwritten, and thus lost.

4 Select the form from the list box. Click **OK**.

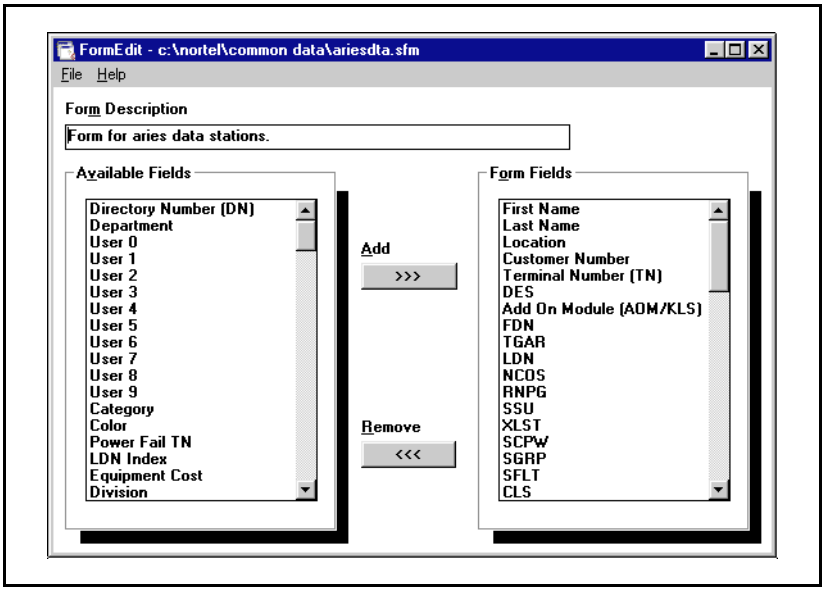
The FormEdit dialog opens.

5 From the Available Fields list, select the field you wish to include in the form, and click **Add**.

The field moves to the Form Fields list.

Alternately, you can select one or several fields to click and drag to move from the Available Fields list to the Form Fields list.

Figure 107
FormEdit window (M2xxx and M3xxx data stations)



6 Move all the desired fields to the Form Fields list.

To change the order of the fields, click and drag the item up or down in the list.

To remove an item from the list, click and drag from the Form Fields list to the Available Fields list, or select the item and click **Remove**.

7 When the Form Fields includes all the desired fields in the correct order, type a descriptive phrase in the Form Description text box.

Note: This is a phrase to help you remember the form's usage, not the filename.

8 Choose **File - Save As** to save the modified form file. <Alt>F-A

Alternately, to exit the forms editor without saving the form, choose **File - Close**. A warning box prompts whether you wish to save the changes before exiting the editor.

Meridian Administration Tools

Station Administration

User Guide

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