

## **DOCUMENTATION FOR MANAGEMENT ACTION TRACKING SYSTEM (MATS)**

Lance Lessler  
May 9, 2001

### **1 Introduction**

MATS is a system for tracking action items in an organization (e.g., FCSS) and its subordinate organizations (e.g., FCSS branches, sections, teams). These may be actions that are assigned to staff for completion by specified due dates, arising either internally, or from outside the organization. It allows users to determine the status of actions as they are being worked, and coming due, so that action items are not neglected or due dates missed. (Although MATS can be used for any hierarchial organization, it will be discussed below in the context of its use in FCSS alone.)

MATS is written in the Clipper Ver. 5.2 database language (with similarities to dBase), using certain "object-oriented" language extensions initially provided by Financial Dynamics, Inc., but later modified by the author, and expanded for use with MATS. It is designed to work in the Microsoft (MS) DOS operating system with extended memory, or in a suitable DOS window within later MS Windows operating systems. MATS can function in a local area network (LAN) environment, with the shared database files being located on a shared network drive, and utilizing network and local HP LaserJet-compatible printers.

### **2 Development Environment**

As stated above, MATS was developed, and is maintained, in a DOS environment, using the Computer Associates Clipper Ver. 5.2 database language. In addition, several different third-party libraries have been incorporated into MATS, as described in the table below:

Third-Party Libraries Utilized in MATS	
Library	Description
Sixnsx	Add-on database indexing system
Std93	Financial Dynamics object-oriented class library - modified by L. Lessler
Esc40	Printer command library for LaserJet-compatible printers
Classy	Class library for implementing object-oriented programming (required by Std93)
Exospace	Included with Clipper - for linking compiled programs into a single executable file
NETLIB	Library for interacting with network - mainly for addressing network printers
Funcky	Miscellaneous utilities library

In addition to these libraries, a text editor (Brief) is used, for developing source code. A library management executable (Lib.exe) is also used, for modifying the Std93.lib file, when changes are made to the source code for Std93.

Recently, it has been discovered that the Lib.exe file, which had been provided as part of Microsoft Assembly Language packages, when that product was available, no longer functions in DOS emulation windows of MS Windows NT 4.0. Because of this and other problems, brought about by creeping obsolescence, **it is likely that there will come a time when it is no longer practical to modify the executable code for MATS in the NRC's MS Windows NT 4.0 environment**, but this still can be done in the MS Windows 98 operating system environment.

### 3 Operating Environment

#### 3.1 Common Files

The data and certain executable files for MATS are currently located on the Network Drive G: for FCSS. Currently, this drive can be seen only by secretaries for FCSS and its branches, and by staff in SSSB. If it were desired that MATS can be viewed and its records modified by other than the FCSS and Branch secretaries, the data and executable files should be placed on the network Drive S:, which spans multiple branches across FCSS. Unfortunately, this opens MATS to possible corruption by a much wider population of NRC users.

#### 3.2 User Setup

##### 3.2.1 User Files

Each user should be provided with a small set of specialized files on his/her desktop PC, as detailed in the following table:

Files to Be Located on MATS Users' Local Hard Drives	
Filename	Description
setup.dbf	Contains initialization information, including file locations for data, user-specific files, backup files, authorization files, private files
prt.dbf	Contains locations of network printers and captured printer ports
bas.dbf	Ready reference list of staff for user's base organization (e.g., FCSS) only.
due.dbf	Local scrap file for putting together strings of due dates for an action
apr.dbf	Contains user performance information specific to actions for appraisals
clk.dbf	Ready reference list of staff for user's actual organization (e.g., SPB) only.
act.clk	Placed in user's private directory (e.g., Drive P:) for authorization purposes

##### 3.2.2 Desktop Icon for MATS

Care must be taken to set up a proper DOS window for MATS, indicated by an icon on the user's Windows desktop. A new shortcut is entered on the user's desktop, which initially

references "command.com" as the Command Line. Once the icon is on the desktop, the properties of the shortcut are edited as follows:

Select the Screen tab, and change the screen selection to "Full Screen"

Select the Program tab, and change the title in the top window to "MATS for FCSS." Change the command line to G:\MATSF CSS\BIN\mat s xn.exe. Change the directory in the "Working" window to "C:\mats." Click on the Windows NT button and replace the Autoexec Filename with "G:\MATSF CSS\BIN\autox.bat." Then, click on OK. Click on "Change Icon" to change the icon to anything you wish. The "Close on exit." box should remain checked. Then, click OK to close the Properties dialog box.

#### 4 MATS Security Provisions

The security provisions for MATS are not intended to protect against malevolent acts. They are merely intended to help prevent user errors, by limiting the opportunities for making mistakes. There are four different security levels for users of MATS, as follows:

##### 4.1 Top Organization Use of MATS - MATS Administrators

For the current application, FCSS is the top organization. Only the two secretaries for the Director's Office in FCSS function as top organization users. These users are designated in MATS as Administrators, and are given full-edit Administrator access to MATS. They are able to open new actions, close existing actions, and modify or update existing actions with but a few exceptions. MATS Administrators can assign staff to actions at the branch level or higher (e.g., Branch Chiefs), but cannot assign staff at the Section or Team level, who are supervised by the Branch Chiefs, Section Chiefs, or Team Leaders.

MATS Administrators are known to MATS through the presence of an act.clk authorization file located on a private drive, and their network login Identification initials, which are compared to those listed for them in the NRC Personnel table.. If the authorization file is found where the user's setup.dbf file says it is, and the NRC Personnel table lists the user's organization as the top organization, then MATS recognizes the user as a MATS Administrator.

##### 4.2 Branch Level Use of MATS - MATS Managers

The secretaries at the Branch level, under FCSS, are designated MATS Managers. They cannot open or close MATS actions, and have limited access for modifying actions. Their main role is to designate the specific staff at the Section or Team level, as determined by the Branch Chiefs. Once staff have been assigned at the Section or Team level, MATS Managers may enter due dates for completion of all or portions of the action within the Branch. MATS Managers can also update the Remarks portion of an action by typing in the appropriate text box.

MATS Managers are known to MATS through the presence of the same act.clk authorization file used to designate MATS Administrators. Again, the authorization file should be located on a private drive. When MATS detects the authorization file and determines that the user's

network login Identification initials, which are compared to those listed for them in the NRC Personnel table, correspond to an individual assigned to other than the top organization (e.g., FCSS Director's office), then MATS recognizes the user as a MATS Manager.

#### 4.3 Individual Users

Individual users at the Branch, Section, or Team level, for whom an authorization file is not found, may be provided access to view the MATS screen displays of actions and print reports, but cannot modify any actions, except for those to which they are assigned. In that respect, they can type in a text box to update the Remarks portion of an action. Individual users are recognized by their network login Identification initials, which are compared to those listed for them in the NRC Personnel table. This capability is not now being used. If it were desired to use it, the shared files would have to be transferred to the shared network Drive S:.

#### 4.4 Access by Other Users

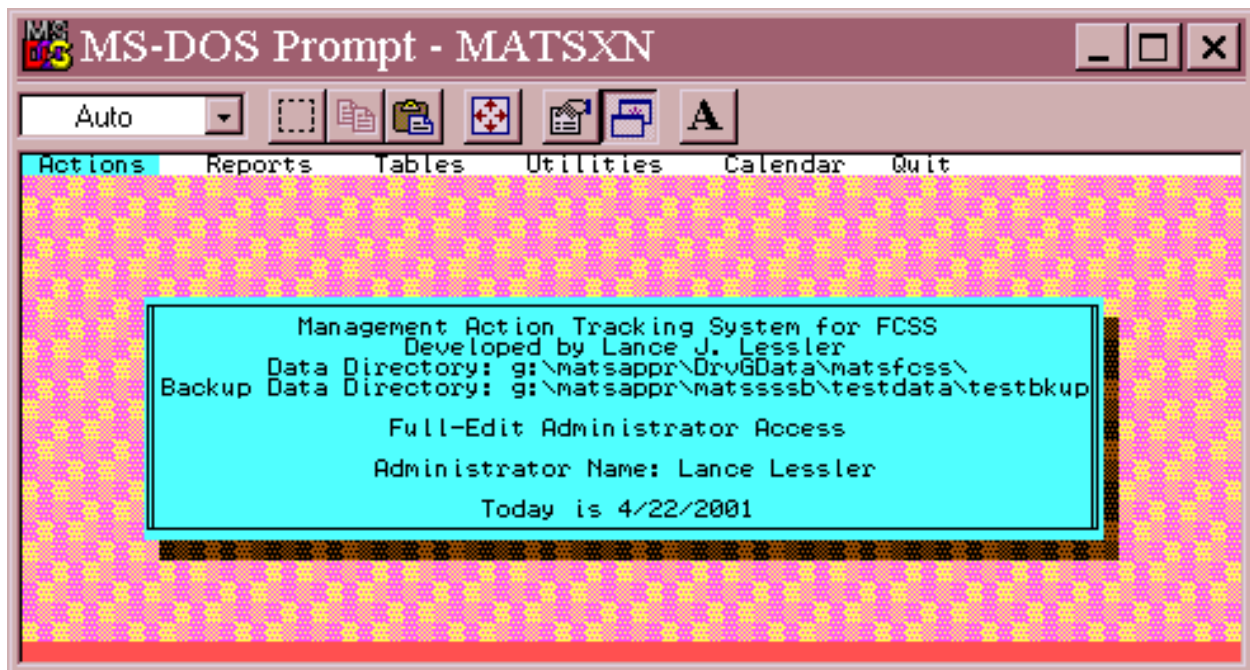
Staff who have access to Drive G:, or Drive S:, if the shared files are transferred to that drive, can accidentally or purposefully delete some or all of the files in the MATSFCSS directory. MATS uses an automated backup routine that backs up shared files on a weekly basis to the user's local drive. In addition, the network support staff have the ability to restore previous copies of files stored on the network, based on the routine backup of files on a daily basis. It is unlikely that non-authorized users would modify individual records in shared files, if they are not provided the appropriate setup files on their local drives.

### 5 MATS Menu System

The MATS executable file is named MATSXN.EXE. MATS is entered by clicking on an icon that has been placed on the user's desktop. This presents the user with a line menu at the top of the screen. All menus in MATS are accessed using cursor keys on the keyboard. The MATS program is not responsive to use of the mouse.

#### 5.1 Main Menu

Figure 1 shows the main menu for MATS. This is the screen presented to the user upon clicking on the desktop icon for MATS and selecting a screen mode of 25, 43, or 50 lines per screen. (Most users will prefer the 25-line screen mode.) The Actions sub-menu permits the user to enter new actions or maintain or close existing actions. Reports can be printed using the Reports menu. The Tables menu is used to maintain the various lists of users, organizations, and other entities that characterize the actions. The Utilities menu supports modifications to the setup data, specification of network printer locations and captured (DOS)



**Figure 1 - Main Menu**

ports, and other administrative functions. (The Calendar menu item leads to a perpetual electronic calendar application. Besides providing a ready reference calendar, the features associated with the calendar application are not used in FCSS, and will not be discussed in detail here.) The Quit menu item allows the user to exit the program, after a confirmation prompt.

## 5.2 Actions Menu

Actions are either ticketed or un-ticketed. A ticketed action is one that is received from a higher level organization (e.g., NMSS, EDO), and is associated with a ticket number assigned by the higher level organization. Some actions generated within FCSS also may be given ticket numbers generated by FCSS. Upon selecting the Actions menu item, the user may elect to view

ticketed actions only, or all actions. Unticketed actions may be generated by MATS Administrators or Managers for actions which do not require the level of accountability provided by a ticket number.

## 5.3 Actions View

Figure 2 shows the screen display after choosing to view both ticketed and unticketed actions. The top half of the screen shows a tabular display of several actions for a 25-line display, one of which has been highlighted. Greater numbers of actions can be shown on screen if the 43-line or 50-line display were chosen. The actions are shown in chronological order. The bottom half of the screen shows some further details of the highlighted action. The indicated cursor keys can be used to scroll the contents of the screen.

MS-DOS Prompt - MATSXN				
Auto				
Update Find aPraisal add_subTask				
All (Open and Closed) FCSS Actions - MATS Manager for SPB				
MATS	Date	Work	Incoming	Received
Action #	Received	Category	Ticket #	From
2000-270	06/22/2000	GENERAL	N2000000262	PMDA/KCarrier
2000-271	06/22/2000	GENERAL	N2000000263	PMDA/KCarrier
2000-272	06/22/2000	GENERAL	F-2000-049	FCSS/LSuarez
2000-273	06/23/2000	GENERAL	N2000000270	PMDA/ANorris
2001-1	01/07/2001	GENERAL		NMSS/BCarter
2001-2	01/16/2001	BI-LATERAL	N2000000550	OCM/CDious
SUBJECT				
COORDINATION OF INTERVIEWS - PHYSICS INTERNS				
REMARKS				
*N2000000262* Action: A.Wong. Input due to SFPO by 6/28/00.				
ASSIGNMENTS				
MTokar				
DUE DATES				
FCSS:6/28/2000				
<Ctrl-PgDn> -> Most Recent Actions, <Ctrl-PgUp> -> Top of List				

Figure 2 - List of actions

#### 5.4 Open New Action

Only a MATS Administrator may open an action. Figure 3 shows the data entry screen for adding a new action or editing an existing one.

Newly opened (added) actions are automatically numbered by MATS, using a format of Fiscal Year, followed by a sequence number. The Fiscal Year must be set manually using the Setup menu under the Utilities>Defaults menu item. (There is an additional capability for entering sub-actions that generally is not used.)

The Received field is a date field that can be filled in manually, or by use of a Calendar subroutine, accessed by hitting the F1 key. All date fields can be entered using the F1 key in this way.

The Last Updated field is always filled in automatically with the current date.

The Work Category field has not been used, but can be filled in with a category chosen from a pre-defined list, accessed by hitting the F1 key.

The Ticket # field must be entered manually.

The Originating Office code is filled in manually, or from a list, accessed by hitting the F1 key.

Once the Originating Office code is entered, the Originator ID # can be entered. This corresponds to a person from the Originating Office. It is noted that when codes are entered, the name associated with the code is always displayed on the screen next to the code. No

MS-DOS Prompt - MATSXN

Auto

Edit/Add Actions: 2001-3- NEW ACTION FOR FCSS Received: / / Last Updated: 04/22/2001

(FY-Action#)

Originating : Work Category:

Office.....: (Code) Ticket #.....:

Originator: (ID #) ( Name )

External : Ext. Contact:

Source....: (Code)

Subject....:

Assigned...: No Staff Yet Assigned

Staff :

Due Dates..:

Remarks....:

Adding record. <Esc> to abort, <F8> to save, <F1> for help entering data.

**Figure 3** - Data entry screen for actions

codes can be entered that are not already on the corresponding list.

If the action originated from an external source, there is an opportunity to enter the code for an external organization, and a name associated with that organization. This is true even for actions passed down from a higher office. The external contact's name is entered as original text, not from a list.

This is true also for the Subject line, which is the next field.

Text cannot be entered for the Assigned Staff field. The user must hit the F1 key to bring down a list of staff associated with the user's organization. If the user is a MATS Administrator for the FCSS Director's Office, then only those staff associated with FCSS down to the Branch level will be assignable. This includes the Branch Chiefs.

Multiple staff can be assigned from the drop-down list. Staff whose supervisors are the Branch or Section Chiefs do not appear when the user is a MATS Administrator, since these staff are assigned at the Branch level by MATS Managers. The MATS Managers can assign additional staff at the Branch level, if the MATS Manager's Branch already has been assigned at the Division level, but cannot alter the staff assigned at the Division level.

The Due Dates field also cannot be entered manually. The MATS Administrator hits the F1 key to bring up a display of date fields corresponding to FCSS and each Branch represented among the assignees. The MATS Manager can enter due dates for staff assigned at the Branch level only.

The Remarks field is a (virtually) unlimited text field that the user can use to enter any text desired. The text automatically wraps in the data entry text box for Remarks, and scrolls when the limited number of visible lines is exceeded. The Remarks field is generally used to provide details about the action not captured in other fields, and to update progress on the action, as it is worked. It is also used to capture details on how the action was closed, at the time of closure.

## 5.5 Edit Action

The same data entry provisions hold for editing actions, as for opening new ones. Only MATS Administrators may edit the portions of an action originally entered upon opening the new action. However, the MATS Administrator may not modify the portion of an action entered by a MATS Manager at the Branch level.

MATS Managers may modify Branch level assignees and due dates, and add modify the content of the Remarks field, but may not modify other fields filled in by MATS Administrators.

## 5.6 Close Action

Only MATS Administrators may close actions. When the Open/close menu item is chosen, the user is prompted for a closing date, that is entered similarly to other date fields. Once closed, an action cannot be edited. However, a closed action may be reopened, and later closed in the normal manner.

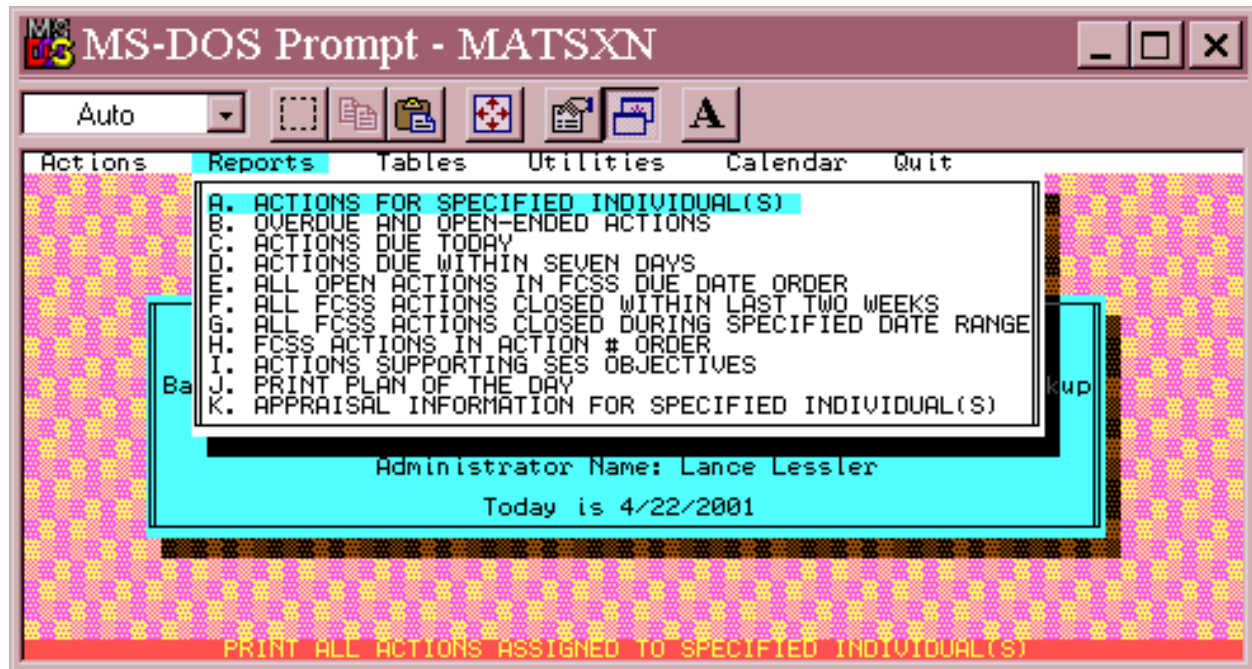


## 5.7 Reports Menu

There are eleven different reports built into MATS.

Each report permits the user to print to a local Hewlett-Packard LaserJet-compatible printer or a preselected network printer. For network printing, it is required that the referenced printer be “captured” to a specified logical printer port.

The details of the reports labeled A through H in the Reports menu (shown in Figure 4) are self-



**Figure 4 - Reports menu**

explanatory. Menu items I through K are not used in FCSS.

## 5.8 Tables Menu

This menu (shown in Figure 5) allows the user to maintain the lists of people and organizations needed to supply the drop-down menus that arise during data entry for actions. The other items in the Tables menu are not used in FCSS. They relate mainly to the Calendar feature in MATS, which also is not used. The sub-menus for the tables do not include Delete as an option, since the data for a particular action may refer to a person or organization long after the person has left the organization, or after there has been a reorganization. Instead, the user is given the option of making an entry in a table inactive. This notation means the line item affected cannot be selected for new actions, but will continue to be referenced if included in a past action. The Active/Inactive field is a logical (i.e., yes or no) field that is Yes by default, for new entries in a table, but can be edited to make an item inactive (i.e., No), when it no longer should be selectable.

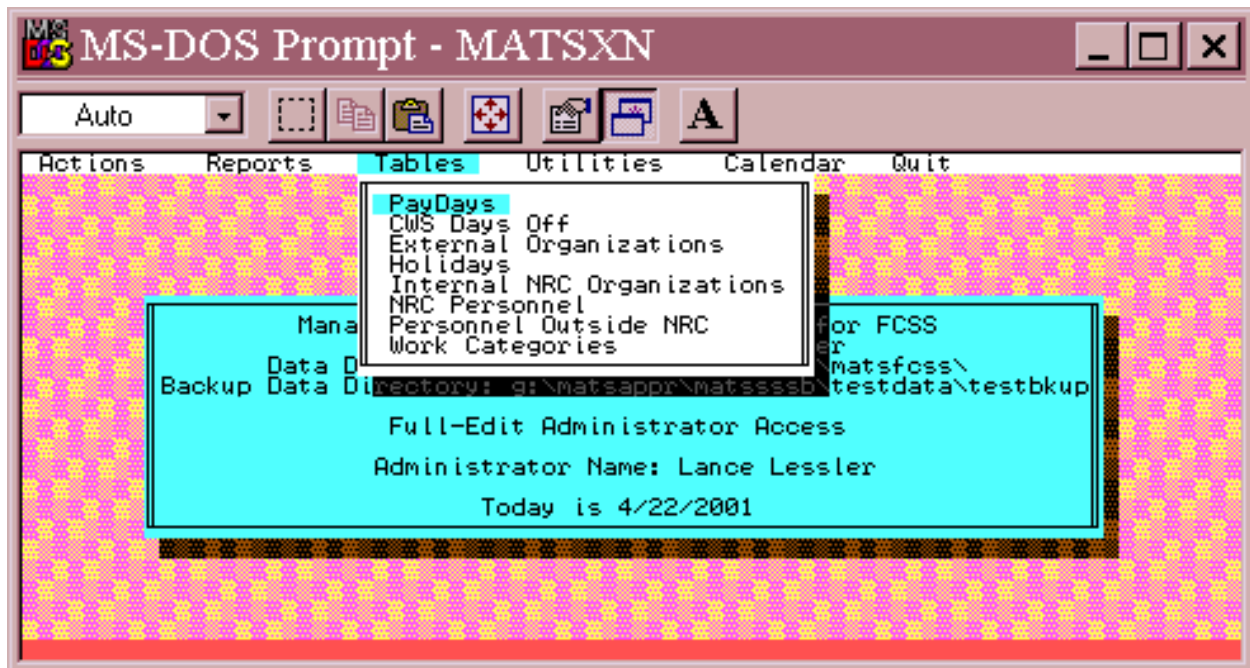


Figure 5 - Tables menu

## 5.9 Utilities menu

The drop-down Utilities menu (Figure 6) provides options for the user to make adjustments in how the MATS program functions. The Reindex and Pack & Reindex menu items provide for reconstructing the index files that make possible the searching and automatic selection of various fields that occur in the background of MATS program operations. The Defaults menu

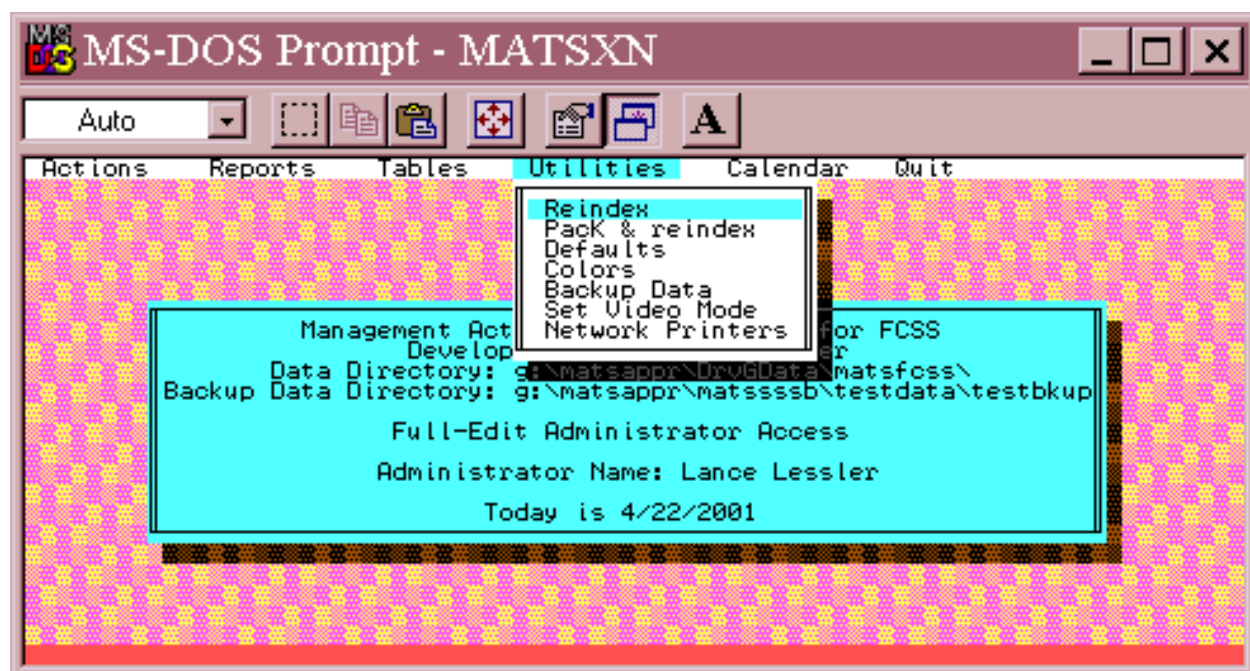


Figure 6 - Utilities menu

item allows the user to specify the location of various setup and executable files, required for the proper functioning of the MATS program. The user can select a different color scheme using the Colors menu item, but needs to be careful, since the wrong choice of colors can render certain information invisible for portions of some screen displays.

The user can also set the video mode to a 25-line, 43-line, or 50-line display, and can backup the data files to location specified in the Defaults data entry screen.

Network printers are specified under the Network Printers menu item. Users need to be careful in specifying the Name of the Queue, since it must be consistent with the way the printers are specified on the network. If the network specification is changed, the Queue names must be changed accordingly. (Unfortunately, changes in the Queue names cannot be anticipated in advance, so there might be some trial and error involved in getting the printers to be addressed properly following such changes.)

Whenever the printer Queue names are changed, the Printer Capture settings in Windows NT must also be changed. This is done by right-clicking on the NRC Network icon on the desktop and selecting Novell Capture Printer Port option.

#### 5.10 Calendar

This feature is not used in FCSS.

End of MATS documentation