# Avatar.

MacMainFrame™ Series
Macintosh-to-Mainframe Link

Version 5.0 Software
Release Notice

MacMainFrame™
Series

Macintosh to Mainframe Link

Revision 5.0 Software

Release Notice

65-2500-102

MacMainFrame Series
Part # 65-2500-102-BB

Printed in the United States of America

Table of Contents

Preface

This document describes the changes that Release 5.0 of the MacMainFrame software brings to the MacMainFrame product line. (Release 5.0 includes all of the features in Release 4.0 of the MacMainFrame software.)

You can use this manual with the following MacMainFrame products:

Part No.	Description	For Macintosh
89-2545-000	MMF Coax Workstation	Macintosh II Family
		Macintosh Quadra
89-2560-000		Macintosh SE/30
89-2565-000		Macintosh SE
89-2555-000		Macintosh LC or LC II
89-2530-000	MMF DX Unit	All Macintoshes
89-2801-000	MMF Token-Ring Workstation	Macintosh II Family
		Macintosh Quadra
89-3001-000		Macintosh SE/30
89-2901-000		Macintosh SE
89-3201-000	MMF SDLC Workstation	Macintosh II Family
		Macintosh Quadra
89-3301-000		Macintosh SE/30

Part No.	Description	For Macintosh
89-2750-000	MMF Coax Gateway	Macintosh II Family
		Macintosh Quadra
89-2700-000		Macintosh SE/30
89-2730-000		Macintosh SE
89-2760-000		Macintosh LC or LC II
89-2808-000	MMF Token-Ring Gateway	Macintosh II Family
89-2832-000		or Macintosh Quadra
89-2864-000		
89-3008-000		Macintosh SE/30
89-3032-000		
89-3064-000		
89-2908-000		Macintosh SE
89-3208-000	MMF SDLC Gateway	Macintosh II Family
89-3232-000		or Macintosh Quadra
89-3264-000		
89-3308-000		Macintosh SE/30
89-3332-000		
89-3364-000		

Part No.	Description	For Macintosh
89-2570-000	MMF Graphics Option	Macintosh LC or LC II Macintosh II Family or Macintosh Quadra Macintosh SE/30

Audience

This manual is for people who install MacMainFrame products, people who administer MacMainFrame networks, and people who use MacMainFrame applications.

How To Use This Document

This document covers changes that Release 5.0 and Release 4.0 of the MacMainFrame software bring to the MacMainFrame product line. Release 5.0 of the software includes all of the features in Release 4.0. And this document includes the entire contents of the MMF 4.0 Release Notice and the MMF 4.0 Release Notice Addendum.

If you are upgrading from

• Release 4.0 to Release 5.0, read Chapters 1 and 2.

• A release earlier than Release 4.0, read Chapters 1, 2, and 3.

If you have never used MMF before, read Chapters 1, 2 and 3.

Chapter 1 — Introduction

Chapter 2 — MacMainFrame 5.0

Chapter 3 — MacMainFrame 4.0

Be sure to use this Release Notice with the manuals that come with your MacMainFrame product(s). See the "Related Documents" section below.

Related Documents

Coax Workstation Installation Guide	Avatar Part No. 65-2500-101
Token-Ring Workstation Installation Guide	Avatar Part No. 65-2800-101
SDLC Workstation Installation Guide	Avatar Part No. 65-3200-101
Coax/Token-Ring/SDLC Workstation User's Guide	Avatar Part No. 65-2500-100
Coax/Token-Ring/SDLC Gateway Server Administrator's Guide	Avatar Part No. 65-2700-000
Coax/Token-Ring/SDLC Gateway Client User's Guide	Avatar Part No. 65-2700-010
Graphics Option User Guide	Avatar Part No. 65-2570-000

For More Information

For additional information about a specific MacMainFrame product, see the latest Release Notices and Upgrade Notices for that product or product line. Contact your Avatar representative for more information.

For More Help

Contact Avatar Customer Support:1-800-282-8276. (In Canada, call 1-800-235-8276.)

Terminology

For convenience, we'll occasionally refer to any MacMainFrame Series product as a **MMF product** hereafter.

To refer to the MacMainFrame software, we'll sometimes say simply **MMF** when it's not important which module – the application, the drivers, or other software – is responsible for the given effect.

Chapter 1

Introduction

MacMainFrame 5.0 New Features

Release 5.0 of the MacMainFrame software includes several new features:

- MMF 5.0 supports Macintosh Quadra machines, Macintosh LC II machines, and Macintosh PowerBook machines.

- MMF 5.0 Token-Ring and SDLC products support larger Maximum I-Frame Sizes, which increases the size of packets sent over the SNA network.

- MMF 5.0 supports D0 Structured Field-based file transfer.

- MMF 5.0 lets you Print, Save, and Log the data in your 3270 window without requiring you to select the window.

- MMF 5.0 lets MMF Clients connect to the IBM host through Avatar Netway gateways.

- MMF 5.0 lets you keep your Server's configuration when you install a new version of MMF Server software.

- MMF 5.0 lets MMF Clients connect to multiple MacMainFrame gateways or to multiple Netway gateways.

- MMF 5.0 supports Apple's 16/4 Token-Ring hardware.

Changes to User Interface

In Release 5.0 there are also some changes to the MMF user interface that affect the way you set new session settings, select a server, and set up MMF 3287.

Also in Release 5.0 we've consolidated the MMF Client application icon and the MMF Workstation application icon into one icon. Both MMF Client users and MMF Workstation users now use the same MMF 3270 application icon.

MMF 5.0 Includes all MMF 4.0 Features

Release 4.0 of the MacMainFrame software included several new features:

- MMF 4.0 supports the new Macintosh hardware platforms.

- MMF 4.0 has a new Special Settings menu that includes various new optional features.

- MMF 4.0 supports up to 64 LU session classes on MMF Gateway Server machines

- MMF 4.0 allows a MMF Client to run on a MMF Gateway Server machine.

- MMF 4.0 has consolidated driver icons for both CUT and DFT.

- MMF 4.0 lets you restrict LU session classes.

Under System 7.0, MMF 4.0's features also include:

- MMF 4.0 has the new System 7.0 Help balloons feature.

- MMF 4.0 supports other standard System 7.0 features such as Publish & Subscribe and TrueType.

- MMF 4.0 has multicolored icons

What You Need First

As with all releases of MMF, you need a Macintosh computer, Macintosh System software, and a network connection to your IBM host computer.

In more detail:

Using MMF 5.0 With Existing Hardware and Software

Hardware

No upgrades to your Avatar hardware are necessary to run MMF 5.0.

MMF 5.0 runs on all Macintosh hardware platforms including the Macintosh Quadra, Macintosh LC II, and the Macintosh PowerBook.

Software

You don't need to upgrade your Macintosh System software, providing you're running the following version of the System software:

If you're running Version 6   6.0.7 at least

If you're running Version 7   7.0 at least

Using Previous Session Settings Documents

IMPORTANT: If your Session Settings documents were created with MMF version 3.35 or later, you can use them as is with MMF 5.0. When you're ready to save these old documents, MMF 5.0 will save them in the new format.

MMF 5.0 cannot read Session Settings documents made by MMF software earlier than MMF 3.35 If you need information from these older documents, open them under your old MMF software, copy the information by hand, and then enter the information into new Session Settings documents that you create using MMF 5.0.

NOTE: If you were running **MMF Client** software, you won't be able to open your older Session Settings document by double-clicking on the document icon. This is because we've replaced the MMF Client application with the MMF 3270 application icon. To open a MMF Client Session Settings document using the new MMF 3270 software you must:

1. Launch the new MMF 3270 application.

2. In the File menu, select Open.

3. Select the Session Settings document that you want to open.

Once you save the Session Settings document, you will be able to open your Session Settings document by double-clicking on the document icon.

Using Previous Server Configuration

Version 5.0 of the Server Control application has a new feature called Import Configuration which imports your class definitions from your old MMF Server drivers.

See the section called "Import Configuration Feature for MMF Server Control" below.

Installation

IMPORTANT: Before you install MMF 5.0 software, you must remove your old MMF software from your hard disk drive so that your new MMF 5.0 software can function properly.

Once you've saved the information you need from older Session Settings documents (documents created with software earlier than MMF 3.35), and you've removed older MMF icons, you can install the MMF software as usual.

Be sure to discard the following old MMF icons:

- For **MMF Workstation**, discard
  - old MMF Workstation application
  - old Avatar icon (control panel document)
  - old driver icon (either Coax, Token-Ring, or SDLC)
  - old MMF 3287 icon
  - old Armon and Armonk font icons
  - old Checker

- For **MMF GW Client**, discard:
  - old MMF GW Client application
  - old Net 3270 Chooser icon
  - old ADSP system document
  - old MMF 3287 icon
  - old Armon and Armonk font icons

  REMEMBER: In Release 5.0 we've consolidated the MMF Client application icon and the MMF Workstation application icon into one icon. Both MMF Client users and Workstation users now use the same MMF 3270 application icon.

- For **MMF GW Server**,

  DON'T DISCARD your old driver icon if you wish to save your existing server configuration. See the Import Configuration feature for MMF Server Control in Chapter 2 or more information.

  However, you DO need to discard:
  - old Server Control application
  - old Checker

- If you're installing **any MMF 5.0 Token-Ring product** – either MMF Token-Ring GW Client, MMF Token-Ring Workstation, or MMF Token-Ring GW Server – also discard:

  - old AvaTR software

  REMEMBER: You must install your new version of AvaTR software. See your *Token-Ring Workstation Installation Guide* or your *Coax/Token-Ring/SDLC Gateway Administrator's Guide* for information on how to install AvaTR.

Chapter 2

MacMainFrame 5.0

MMF 5.0's New Features

This chapter is divided into sections that cover:

- MMF Session Settings

- MMF Clients connecting to Netway Gateways

- Larger Maximum I-Frame Size for Token-Ring and SLDC products

- D0 Structured Field-based File Transfer

- Printing, Saving, and Logging entire 3270 windows

- Import Configuration feature for MMF Server Control

- MMF 3287 user interface

MMF Session Settings

The MMF Session Settings dialog box has been replaced with the Session Parameters and Display Settings dialog boxes. The following sections describe how to set:

- Session Parameters -

  - MMF Workstation Users
  - MMF Client Users
  - MMF DX Users

- Display Settings - All Users

As with earlier versions of MMF, you can save your settings in a Session Settings document.

Session Parameters- MMF Workstation Users

1. To begin a new session, pull down the File menu and select N e w (or N e w Session...).

MMF will display this dialog box:

> **Please Select Session Parameters:**
>
> **LU Number:**   [🖥 2]
>
> **Screen Size:**   [🖳 24 rows, 80 cols (Mod 2)]
>
> ☐ **Use Extended Attributes**
>
> (**Cancel**)   ([**Connect**])
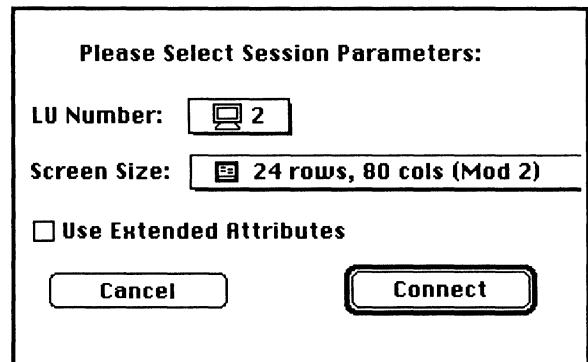
2. Fill in this screen as you normally would.

Session Parameters - MMF Client Users

There are some differences in the way you select a server using MMF 5.0. Instead of using the Chooser to select a server, you now pull down the File menu and select **New** (or **New Session...**). MMF will then present the Select Session Parameters dialog box. Example:

```
┌─────────────────────────────────────────────────────────────────┐
│              Please Select Session Parameters:                   │
│                                                                  │
│ AppleTalk Zone:          Server:              Class:             │
│ ┌──────────────────┬─┐  ┌─────────────────┬─┐ ┌──────────────┬─┐│
│ │ LocalTalk EAST   │⬆│  │Computer Room SDLC│⬆│ │Model-2       │⬆││
│ │ LocalTalk Irvine │ │  │                 │ │ │Model-2 APA   │ ││
│ │ LocalTalk WEST   │ │  │                 │ │ │Model-2 EAB   │ ││
│ │ Novell EAST      │ │  │                 │ │ │Model-3       │ ││
│ │ Novell WEST      │ │  │                 │ │ │Model-3 APA   │ ││
│ │ Peripherals      │ │  │                 │ │ │Model-3 EAB   │ ││
│ │ TokenTalk Services│ │ │                 │ │ │Model-4       │ ││
│ │ TokenTalk Users  │⬇│  │                 │⬇│ │Model-4 EAB   │⬇││
│ └──────────────────┴─┘  └─────────────────┴─┘ └──────────────┴─┘│
│                                                                  │
│                               ┌──────────┐  ┌───────────────┐   │
│                               │  Cancel  │  │   Connect     │   │
│                               └──────────┘  └───────────────┘   │
└─────────────────────────────────────────────────────────────────┘
```
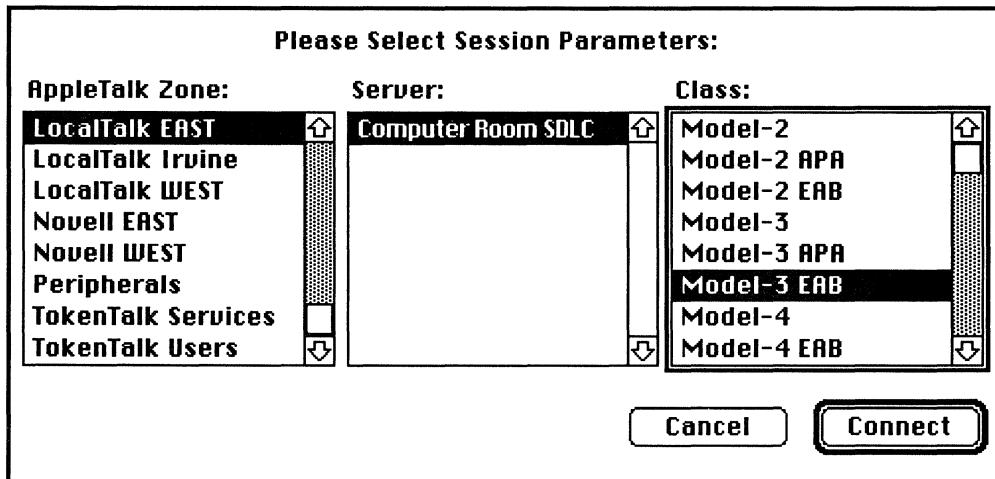
To open a new session:

1. In the AppleTalk Zone: box, select the AppleTalk Zone where the server that you wish to connect to is located.

    The Server: box will then display a list of MMF Servers that are available in that zone.

2. In the Server: box, select a Server.

    The Class: box will then display a list of session classes that are available on the server that you selected.

3. In the Class: box, select a session Class.

4. If you select a class that requires a password, a Password: box will appear in the Connection Settings dialog box.

    If it's required, fill in the correct password.

5. Click Connect to get a new session.

Multi-Server Feature

MMF's multi-server feature will let you open sessions on more than one MMF Gateway or on more than one Netway Gateways. However, you can't open sessions on MacMainFrame and Netway Gateways at the same time.

To open additional sessions, pull down the File menu, select **New Session...**, and follow the steps above for opening new sessions.

Session Parameters- MMF DX Users

1. To begin a new session, pull down the File menu and select N e w (or N e w Session...).

   MMF will display this dialog box:

   Please Select Session Parameters:

   Screen Size: [⊞ 24 rows, 80 cols (Mod 2)]

   ☐ Use Extended Attributes

   Serial Port: ◉ [☎] ○ [🖨]

   Baud Rate: [1200 bps]

   Connection Sequence: [|]

   Modem Delay Character: [/]

   Password: [ ]

   [Cancel] [Connect]
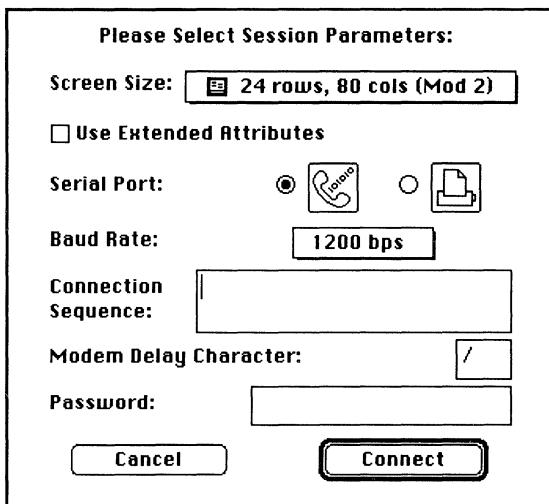
2. Fill in this screen as you normally would.

Documentation Error

Page C-86 of the *MacMainFrame Coax Workstation Installation Guide*, which explains the MMF DX Configuration Settings, should read:

Modem Connection Signal Causes a remote DX unit to listen for an interpret data on the RX data line and transmit data over the TX data line on its modem as follows:

- Monitor DCD (Hayes Compatible) Remote DX unit will not send or receive over the RX data and TX data lines until the DCD signal becomes active.

- Monitor CTS (Other) Remote DX unit will not send or receive over the RX data and TX data lines until the CTS signal becomes active.

Display Settings.

To set your Display Settings, pull down the Settings menu and select Display...
MMF will present one of these Display Settings dialog boxes.

Color Monitors:

Display Settings

Screen font size [12 ▼] Print font size [9 ▼]

Print font [*Armonk* ▼]

Cursor style ○ Underline ● Block
☐ Use Host Cursor ☒ Blinking

Background ● [White] ○ [Black]

| Black | Blue | Red | Green |
| Pink | Turquoise | Yellow | Hilight |

[Default Colors]

[OK]   [Cancel]

Monochrome Monitors:

Display Settings

Screen font size [12 ▼] Print font size [9 ▼]

Print font [*Armonk* ▼]

Cursor style ○ Underline ● Block
☐ Use Host Cursor ☒ Blinking

Background ● White ○ Black

[OK]   [Cancel]

Fill in these dialog boxes as your normally would.

NOTE: When you open a new 3270 session, MMF 5.0 will copy your display settings and apply them to your new session.

You can now save your Connection Settings and Display Settings in a Session Settings document.

MMF Clients Connecting to Netway

With Release 5.0, you can use MMF Workstation software to connect to the IBM host through Avatar's Netway 1000 and 2000 gateways.

What You Need First

To use MMF Workstation software with a Netway, you'll need to:

1. Copy the Netway Client driver icon and the Avatar icon, shown here, into your System Folder.

    NetWay Client   Avatar
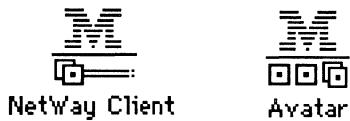
2. Select the Netway Client driver in the Avatar Control Panel:

    →
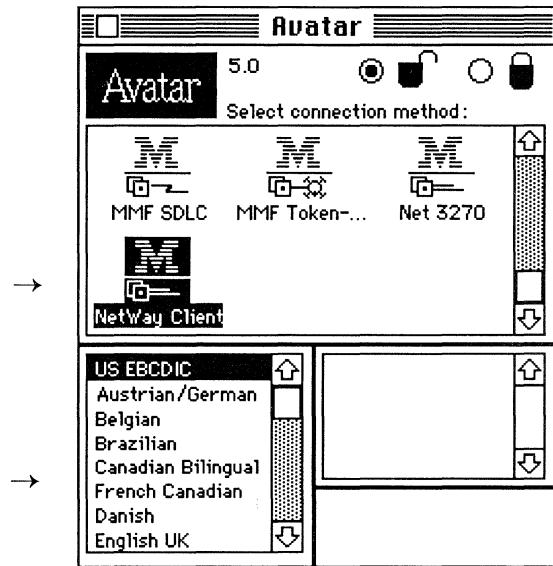
3. Scroll through the list of languages that appear in the Control Panel and select the language that's configured   →
    on your BM host. See your IBM system manager for information about this language.

4. Restart your Macintosh.

Opening a New Session

1. Launch the MMF 3270 application.

2. Pull down the File menu and select **New....**

MMF will display
this Select Session
Parameters
dialog box:

```
┌─────────────────────────────────────────────────┐
│        Please Select Session Parameters:         │
│                                                   │
│   AppleTalk Zone:          Gateway:              │
│  ┌──────────────────┬─┐  ┌──────────────────┬─┐  │
│  │ Eng - 9999       │⇧│  │ H-TR-PUU         │⇧│  │
│  │ EtherTalk EAST   │ │  │                  │ │  │
│  │ EtherTalk WEST   │ │  │                  │ │  │
│  │ LocalTalk EAST   │▓│  │                  │ │  │
│  │ LocalTalk WEST   │▓│  │                  │ │  │
│  │ Novell EAST      │▓│  │                  │ │  │
│  │ Novell WEST      │ │  │                  │ │  │
│  │ Peripherals      │⇩│  │                  │⇩│  │
│  └──────────────────┴─┘  └──────────────────┴─┘  │
│                                                   │
│   LU Name:     ┌──────────────┐                  │
│                │ ********      │                  │
│                └──────────────┘                  │
│   Screen Size: ┌────────────────────────────┐    │
│                │ ▣ 24 rows, 80 cols (Mod 2) │    │
│                └────────────────────────────┘    │
│   ☐ Use Extended Attributes                      │
│   ┌──────────────┐      ┌──────────────────┐     │
│   │    Cancel    │      │     Connect      │     │
│   └──────────────┘      └──────────────────┘     │
└─────────────────────────────────────────────────┘
```
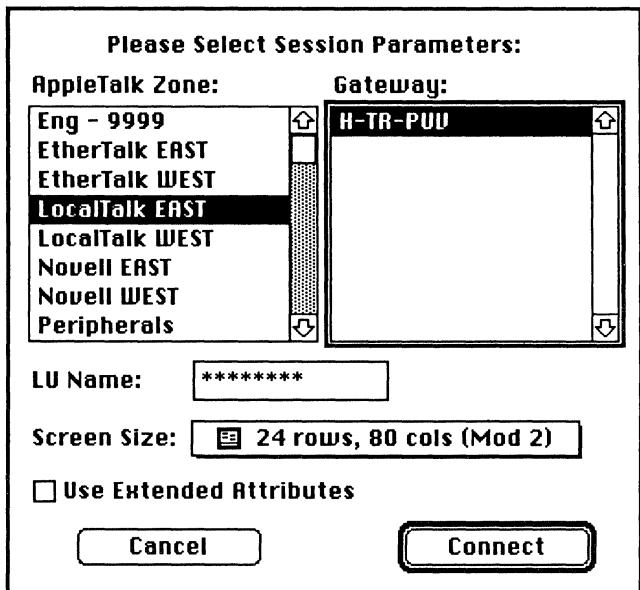
3. In the AppleTalk Zone: box, select the AppleTalk Zone where your Netway gateway is located.

   The Gateway: box will then display a list of Netways that are available in that zone.

4. In the Gateway: box, select a Netway Gateway.

5. If your system administrator has assigned **LU Names** to the Netway, you will need to fill in the appropriate LU Name in the LU Name: edit box. Check with your system administrator.

6. Select your Screen Size: and if you wish ,select Use Extended Attributes.

7. Click **Connect** to get a new session.

You can now use MMF as you normally would. You can save your session settings and open new sessions.

Maximum I-Frame Size

MMF Token-Ring and SDLC Workstation and Gateway products now support larger frame sizes for transmitting and receiving data over the SNA network. Maximum I-Frame Size is the maximum amount of data in bytes that MMF can send or receive in one segment of a path information unit (PIU). A PIU is a unit of data transfer in the SNA protocol. (This doesn't affect the size of AppleTalk packets sent over the Token-Ring network.)

You set the Maximum I-Frame Size using the Token-Ring or SDLC configuration panels as described below.

IMPORTANT: MMF's Maximum I-Frame Size setting must match your host system configuration. (That is, the host's MAXDATA setting.) You should obtain the correct frame size from your IBM system manager or from your network administrator. MMF's default frame size is 265 bytes.

For Token-Ring:

For MMF Workstations - In the Avatar Control Panel, click the **802.5 Setup...** button to get to the Token-Ring Parameters panel:

Enter the correct number of bytes for your host configuration. MMF Token-Ring supports up to 4015 bytes.

New Parameter ›

```
┌─────────────────────────────────────────┐
│ ┌──────┐   Set Token-Ring              │
│ │Avatar│   Parameters:                 │
│ └──────┘                               │
│ ────────────────────────────────────── │
│ Slot: ○ 9 ◉ A ○ 8 ○ C ○ D ○ E         │
│ Burned-In Address:   00013F1B1500      │
│ Locally Administered  ┌────────────┐   │
│ Address:              │400000000027│   │
│                       └────────────┘   │
│ Ring Speed: ◉ 4 Mbps  ○ 16 Mbps       │
│ Host's Address:       ┌────────────┐   │
│                       │400000000001│   │
│                       └────────────┘   │
│ XID - Physical Unit Block:    ┌───┐   │
│                               │017│   │
│                               └───┘   │
│ XID - Terminal ID:          ┌─────┐   │
│                             │00001│   │
│                             └─────┘   │
│ Maximum I-Frame Size (bytes): ┌────┐  │
│                               │4015│  │
│                               └────┘  │
│       ┌────────┐    ┌──────────────┐  │
│       │ Cancel │    │     OK       │  │
│       └────────┘    └──────────────┘  │
└─────────────────────────────────────────┘
```
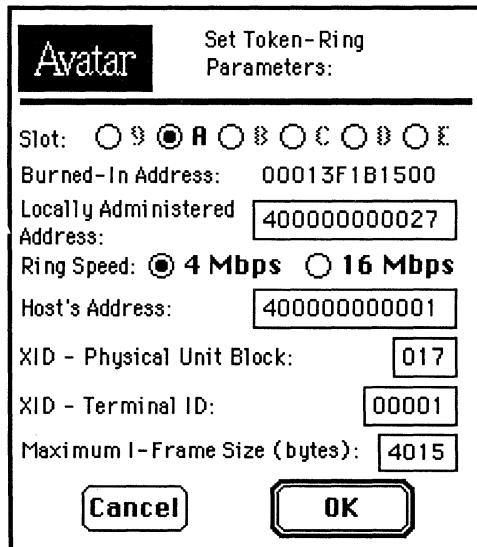
For MMF Gateway Servers
- In the Server Control
application, pull down the
Administer menu and select
Token-Ring Parameters...
to get to the Server Control's
Token-Ring parameters
panel:

Enter the correct number of bytes
for your host configuration. MMF
Token-Ring supports up to 4015
bytes.

New Parameter ›

```
┌────────────────────────────────────────────────┐
│            Token-Ring Parameters                │
│                                                 │
│  Slot:  ◉ 9   ○ A   ○ B   ○ C   ○ D   ○ E       │
│                                                 │
│  Burned-In Address:          00013F791400       │
│                                                 │
│  Locally Administered       ┌─────────────┐     │
│  Address:                   │400000000008 │     │
│                             └─────────────┘     │
│  Ring Speed:       ◉ 4 Mbps      ○ 16 Mbps      │
│                                                 │
│  Host Address:              ┌─────────────┐     │
│                             │400000000001 │     │
│                             └─────────────┘     │
│  XID- Physical Unit Block:          ┌─────┐     │
│                                     │ 017 │     │
│                                     └─────┘     │
│  XID- Terminal ID:                ┌───────┐     │
│                                   │ 00001 │     │
│                                   └───────┘     │
│  Maximum I-Frame Size (bytes):     ┌──────┐     │
│                                    │ 4015 │     │
│                                    └──────┘     │
│                                                 │
│     ┌──────────────┐      ┌──────────────┐      │
│     │     OK       │      │    Cancel    │      │
│     └──────────────┘      └──────────────┘      │
└────────────────────────────────────────────────┘
```

For SDLC:

MMF Workstations - In the Avatar
Control Panel, click the **SDLC
Setup...** button to get to the SDLC
Parameters panel:

Enter the correct number of bytes
for your host configuration. MMF
SDLC supports up to 2057 bytes.

New Parameter ⸱→

```
┌────────────────────────────────────────┐
│ ┌──────┐                                │
│ │Avatar│  Set SDLC parameters:          │
│ └──────┘                                │
│   ◉ External Clock        ◉ NRZ         │
│   ○ Internal Clock        ○ NRZI        │
│                                         │
│   Station Address            ┌────┐     │
│                              │ 05 │     │
│                              └────┘     │
│   Physical Unit Block        ┌─────┐    │
│                              │017  │    │
│                              └─────┘    │
│   Physical Unit ID (XID)   ┌──────┐     │
│                            │01234 │     │
│                            └──────┘     │
│   Maximum I-Frame Size       ┌─────┐    │
│                              │2057 │    │
│                              └─────┘    │
│   ┌──────────┐        ┌──────────────┐  │
│   │  Cancel  │        │     OK       │  │
│   └──────────┘        └──────────────┘  │
└────────────────────────────────────────┘
```
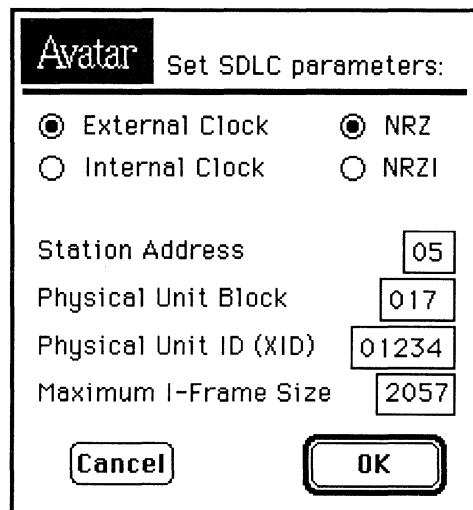
MMF Gateway Servers - In the
Server Control application, pull
down the Administer menu and
select **SDLC Parameters** to get
to the Server Control's SDLC
parameters panel:

Enter the correct number
of bytes for your host
configuration. MMF SDLC
supports up to 2057 bytes.

New Parameter ⸱→

```
┌────────────────────────────────────────┐
│              SDLC Parameters            │
│                                         │
│   ○ External Clock        ◉ NRZ         │
│                                         │
│   ◉ Internal Clock        ○ NRZI        │
│                                         │
│   Baud Rate:    ┌──────────────┐        │
│                 │  9600 bps    │        │
│                 └──────────────┘        │
│                                  ┌────┐ │
│   Control Unit Address:          │05  │ │
│                                  └────┘ │
│                                  ┌─────┐│
│   Physical Unit Block:           │017  ││
│                                  └─────┘│
│                               ┌───────┐ │
│   Terminal ID:                │01234  │ │
│                               └───────┘ │
│                                 ┌──────┐│
│   Maximum I-Frame Size (bytes): │2057  ││
│                                 └──────┘│
│   ┌──────────────┐    ┌──────────────┐  │
│   │     OK       │    │   Cancel     │  │
│   └──────────────┘    └──────────────┘  │
└────────────────────────────────────────┘
```
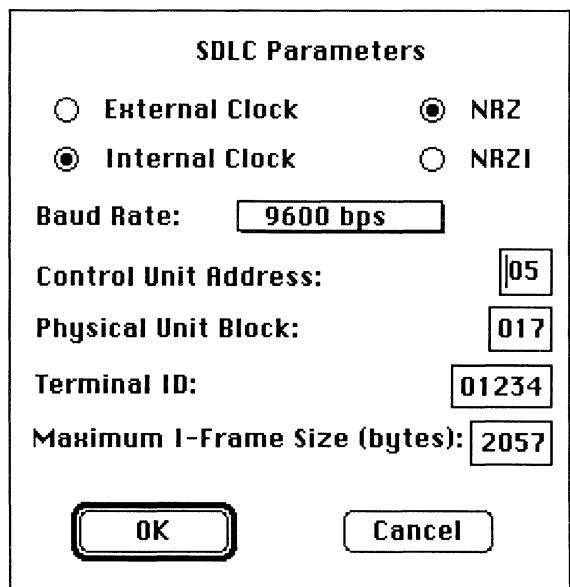
Structured Field-based File Transfer

MMF 5.0 supports D0 Structured Field-based file transfer. D0 Structured Fields is a feature of all recent versions of IBM's IND$FILE file transfer application. Structured Field file transfer is faster than the standard Screen-based method of file transfer.

You don't need to make any changes to the host or to MMF in order to use this feature. If your host and 3270 session support structured field file transfer, MMF will automatically perform file transfers using D0 structured fields. Otherwise, MMF will perform screen-based file transfers. In either case, the data uploaded or downloaded is the same.

Contact your IBM system manager to find out whether or not your system supports D0 structured fields.

Printing, Saving, and Logging Host Data

In earlier versions of MMF, you needed to use the Select All command in order to print, save, or log the the entire 3270 window. With MMF 5.0, you no longer need to use Select All in order to perform these functions.

To print, save, or log the entire 3270 window, follow these steps:

1. Make sure that you haven't highlighted any of the data in your window.

2. Pull down the File menu.

The File menu will display these options for printing, saving, or logging the entire window:

```
┌─────────────────────────────────┐
│ Page Setup...                   │
│ Print Window...        ⌘P        │
│ Saue Window As...                │
│ Log File...                      │
│ Log Window to...   ⌘L            │
└─────────────────────────────────┘
```

3. Select the option you want.

NOTE: As with earlier versions of MMF, you can also print, save, or log only part of the data in your 3270 window. If you wish to do this,

1. Use your mouse to select the data that you wish to print, save, or log.

2. Pull down the File menu.

The File menu will now present these options for printing, saving, or logging your selection:

```
┌─────────────────────────────────┐
│ Page Setup...                   │
│ Print Selection...    ⌘P         │
│ Saue Selection As...             │
│ Log File...                      │
│ Log Selection to...  ⌘L          │
└─────────────────────────────────┘
```
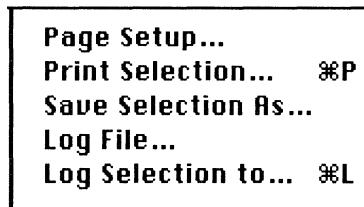
3. Select the option you want.

Import Configuration Feature For MMF Server Control

NOTE: This section is only for people who set up MMF Gateway Servers.

The Import Configuration feature lets you keep your Server's configuration when you install a new version of MMF Server software. Import Configuration saves your:

- Administrator Password
- Server Parameters
- SDLC and Token-Ring Parameters
- Class definitions

To use this feature, follow these steps:

1. Move your old Server driver icon (either Coax, Token-Ring or SDLC) out of your System folder.

2. Install version 5.0 of your Server driver and version 5.0 of the Server Control software.

3 Launch the Server Control application.

4. Pull down the Administer menu and select Import Config...

New Command →

Administer	
New Class...	⌘N
Edit Class...	⌘E
Delete Class...	⌘D
Password...	
Import Config...	
LU Numbers...	
Token-Ring Parameters...	

MMF will present
this dialog box:

```
┌─────────────────────────────────────────────┐
│  ┌──────────────────────────────┐           │
│     [ 🗁 ServerIn ▼ ]        ⊂⊃ Hard Disk    │
│  ┌────────────────────────┬──┐               │
│  │ □ MMF TR Server        │⬆ │   ( Eject  )  │
│  │                        ├──┤               │
│  │                        │  │   ( Desktop ) │
│  │                        │  │ ··········    │
│  │                        │  │   ( Cancel )  │
│  │                        ├──┤               │
│  │                        │⬇ │  (( Open ))   │
│  └────────────────────────┴──┘               │
└─────────────────────────────────────────────┘
```
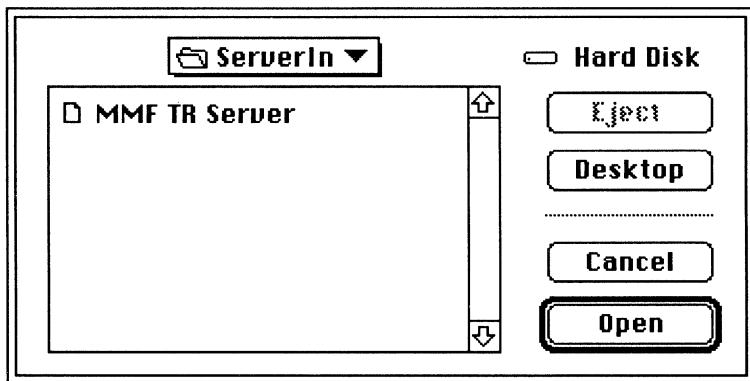
6. Locate and select the old version of your MMF Server driver, then click Open.

   MMF Server Control will import your LU session class configuration.

7. Save your class configurations in version 5.0 by pulling down the File menu and selecting Save.

   MMF will save the information in the new Server driver.

8. Remove your old MMF Server driver from your hard disk.

MacMainFrame 3287

In MMF 5.0 there are some changes to the way that you set print parameters for your MMF 3287 session.

Here's how to do it in MMF 5.0:

1. If you're using MMF Workstation hardware, you must select a Printer LU in the Avatar Control Panel.

2. Launch the MMF 3287 application by double-clicking on the MMF 3287 icon.

MMF 3287 will display this Formatting Options dialog box:

Set these formatting options as you normally would. (See your MMF Workstation or MMF Client user guide for more information.)

Please Select Formatting Options:

Destination:	◉ Printer ○ Disk
Pages per Job:	10
Job Timeout:	15 seconds
End of Line:	◉ Truncate ○ Wrap
Spacing:	◉ Single ○ Double
Font:	*Armonk*
Font Size:	11

OK Cancel
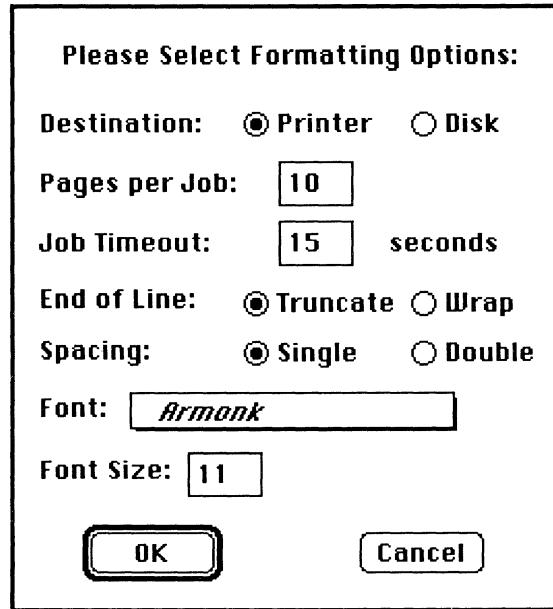
3. Click **OK** after you have filled in your formatting options.

   MMF 3287 will display the Page Setup dialog box for your printer. Example:

LaserStation "LaserWriter II HAL"	7.0	Print
Copies: 1 Pages: ● All ○ From: [ ] To: [ ]		Cancel
Cover Page: ● No ○ First Page ○ Last Page		
Paper Source: ● Paper Cassette ○ Manual Feed		
Print: ● Black & White ○ Color/Grayscale		
Destination: ● Printer ○ PostScript® File		Feeder
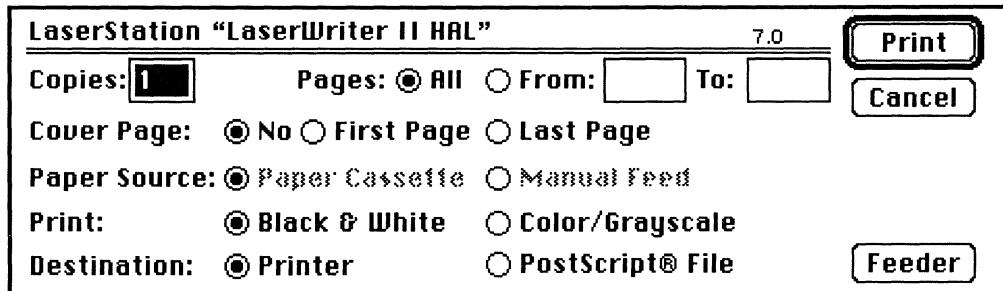
4. Fill in the Page Setup dialog box and click **Print.**

   MMF Workstation will then display the Session Parameters screen:

   Please Select Session Parameters:

   LU Number: [🖨 3]

   Buffer Size: [▤ 24 rows, 80 cols (Mod 2)]

   [Cancel] [Connect]
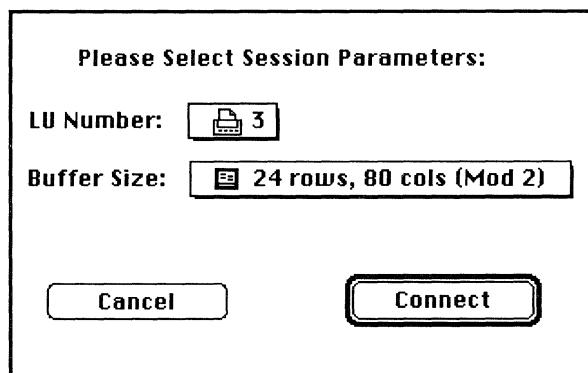
   The Session Parameters screen displays your LU Number and lets you select your print buffer size. Below is a list of the buffer size selections and their equivalent size in bytes.

   24 rows, 80 columns = 1920 bytes

   32 rows, 80 columns = 2560 bytes

   43 rows, 80 columns = 3440 bytes

   27 rows, 132 columns = 3564 bytes

5. Make any changes that you wish to the Buffer Size and then click Connect.

MMF Client will display this screen:

```
┌─────────────────────────────────────────────────────────────────────┐
│              Please Select Session Parameters:                        │
│                                                                       │
│ AppleTalk Zone:          Server:                 Class:               │
│ ┌──────────────────┬─┐  ┌──────────────────────┬─┐ ┌──────────────┬─┐│
│ │ LocalTalk EAST   │⬆│  │ Computer Room SDLC   │⬆│ │ PTR P7-L32   │⬆││
│ │ LocalTalk Irvine │ │  │                      │ │ │ PTR P7-L33   │ ││
│ │ LocalTalk WEST   │ │  │                      │ │ │              │ ││
│ │ Novell EAST      │ │  │                      │ │ │              │ ││
│ │ Novell WEST      │ │  │                      │ │ │              │ ││
│ │ Peripherals      │ │  │                      │ │ │              │ ││
│ │ TokenTalk Services│ │  │                      │ │ │              │ ││
│ │ TokenTalk Users  │⬇│  │                      │⬇│ │              │⬇││
│ └──────────────────┴─┘  └──────────────────────┴─┘ └──────────────┴─┘│
│                                                                       │
│                             ( Cancel )    (( Connect ))               │
└─────────────────────────────────────────────────────────────────────┘
```
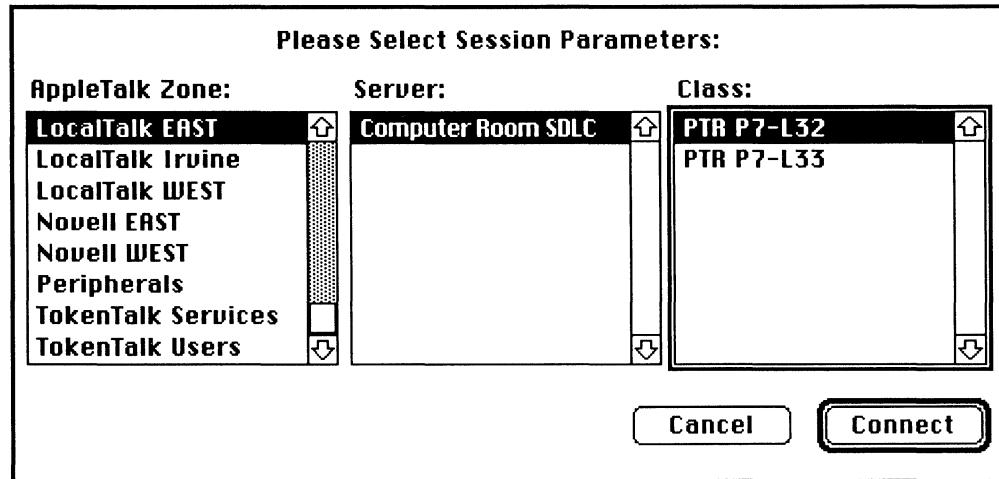
- In the AppleTalk Zone: box, select the AppleTalk Zone where the server you you wish to connect to is located.

  The Server: box will display a list of Servers that are available in that zone.

- In the Server: box, select a Server.

  The Class: box will display a list of printer classes that are available on the server that you selected.

- In the Class: box, select a printer Class.

- Click Connect.

MMF 3287 will then display this Status window:

```
┌═══════════════════════════════════════════════════════┐
│ ▤□══════════════ Untitled ═══════════════════════════  │
├───────────────────────────────────────────────────────┤
│                                                         │
│   Job Status:     Waiting for Print Data                │
│                                                         │
│   Job Name:       <none>                                │
│                                                         │
│   Logical Unit:   LU 3                                  │
│                                                         │
│   Current page:   0                                     │
│                                                         │
│   Current line:   0                                     │
│                                                         │
└─────────────────────────────────────────────────────────┘
```
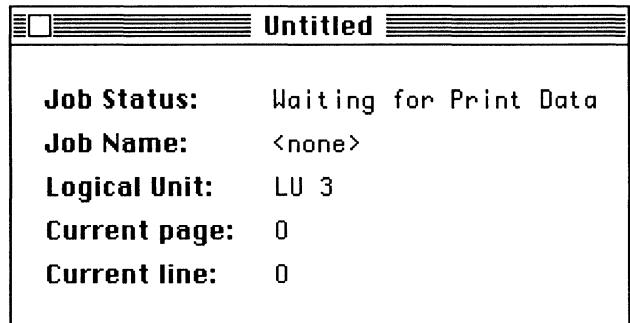
You are now ready to print.

Enabling/Disabling Printing

With MMF 5.0, you no longer need to Enable or Disable MMF 3287 printing. You can close the Status window and leave MMF 3287 running in the background. The MMF 3287 Settings menu lets you show the status window, change connection settings, and change the 3287 formatting.

Settings
Connection...
3287 Formatting...
Show Status Window
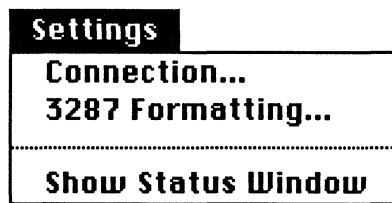
Chapter 3

MacMainFrame 4.0

MMF 4.0's Features

This section and the next two sections describe the features that MMF 4.0 added to the MMF product. Since these features are all included in MMF 5.0, too, we've referred to them as MMF 4.0/5.0 features throughout this chapter. If you are already using MMF version 4.0, you don't need to read this chapter.

The features in this section are:

- New icons
- Balloon Help
- Support for True Type display technique
- Support for Session Settings files on Macintosh stationery
- New Location of Some MMF Graphics Features
- More Session Classes on MMF GW Servers
- Ability to run MMF GW Client on a MMF GW Server machine
- Alternate method of pasting data into 3270 windows
- Support for file transfer in TOSS environments
- PA3 Key for DFT keyboards

Three more features, which are a bit more complex, are described in their own succeeding sections:

- Special Settings menu
- Support for Macintosh Publish & Subscribe operations
- Restricted LU Classes

REMEMBER: Some features are available only when you're running MMF under Macintosh System 7.0. This is noted in the text where appropriate.

New Icons

The various **driver icons for MMF Coax Workstation** products have been consolidated into two icons, one for DFT Workstations and one for CUT workstations. (These new icons are available starting with MMF 3.34.)

New Icons		Old Icons		
DFT — MMF DFT	Replaces	SE· — Mac SE DFT	SE/30 — SE/30 DFT	II· — Mac II DFT
CUT — MMF CUT	Replaces	SE· — Mac SE CUT	SE/30 — SE/30 CUT	II· — Mac II CUT

The icon for the **basic MMF GW Server software** has been divided into three versions, Coax, Token-Ring, and SDLC Servers:

New Icons				Old Icon
MMF Coax Server	MMF Token-Ring Server	MMF SDLC Server	Replace	MMF Coax Server, MMF Token-Ring Server, MMF SDLC Server

The icon for the **postscript version of the Armonk font** has changed:

New Icon	Old Icon
Armon	Armon
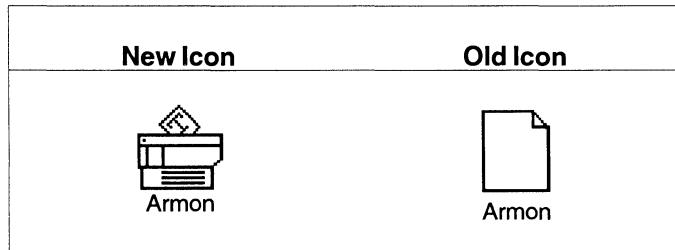
Also: The DX CUT icon has been renamed MMF DX.

And many of the icons have new colors, which are visible on color monitors.

Balloon Help

Balloon Help gives you a quick and easy way to get acquainted with the features of your MMF product. It's especially useful if you're a first-time user, but you might also find it handy as a quick on-line reference.

When Balloon Help is turned on, balloons appear as you move your cursor over the various windows, menus, etc. in your MMF product. For example, when you move your cursor over the MMF File menu, you'll see a balloon like this:

File menu

Use this menu to manage disks, folders, and documents, to select and save information from 3270 windows, and to transfer files.
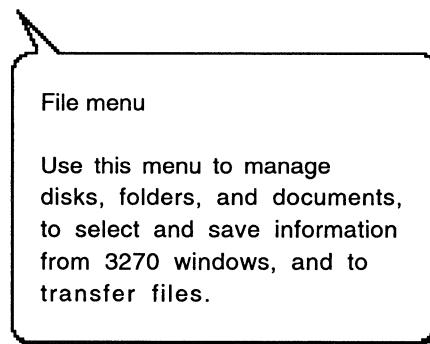
You turn the balloons on and off by pulling down the Balloon Help menu: [?] , which appears on the Macintosh's main menu bar.

True Type

> **Available Under Macintosh System 7.0 Only.**

MMF 4.0/5.0 supports the display technique known as True Type for its print fonts. This means that when you print larger fonts, which the Macintosh tended to approximate with fairly jaggy versions, MMF smooths the font, and the letters look more like they should.

With TrueType: Without TrueType

R   R
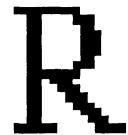
True type also lets you use a wide and continuous range of font sizes, rather than the familiar 9-10-12-14-18-24 range.

True Type works on:

*   Fonts that you print from MMF to your Chooser printer or local Macintosh printer.

*   3287 print fonts, which you use with MMF 3287.

True Type does not work on:

*   Fonts as they appear in your MMF 3270 windows.

Session Settings Files Can Be On Stationery

> **Available Under Macintosh System 7.0 Only.**

MMF 4.0/5.0 lets you use the new file type, stationery, to save your MMF session settings.

For more information on stationery pads, please see your Macintosh System 7.0 documentation.

New Location of Some MMF Graphics Features

In Release 4.0/5.0 of MMF Graphics, we moved two features to a new location in the MMF user interface. (This move allows smaller monitor screens to continue to display all items in the Session Settings dialog boxes.)

The two features are:

- Graphics colors, and
- Graphics font.

In MMF 4.0/5.0 they are now available in the Settings menu:

MMF 4.0/5.0 Location: {

```
Settings
Session...
Host...
Graphic Colors...
Graphic Font...
...............................
Keyboard...
...............................
Reset Session
Special...
```

If the current LU session is not set to Graphics, the Graphic Colors... and Graphic Font items will be grayed., as they are in the diagram above.

REMINDER: Set your LU sessions to Graphics by going to the LU panel in the Avatar panel, positioning the cursor over an LU, holding down the OPTION key, and clicking until the LU changes to the appropriate type (choices are Terminal, Printer, and Graphics).

Graphics Color Feature

With some IBM graphics applications, you have a choice of more colors. To see these colors, select Graphic Colors... in the Settings menu.

MMF Graphics will display the following dialog box:

```
┌─────────────────────────────────────────────────┐
│                                                   │
│  Background  ◉ [  White  ]   ○ [  Black  ]       │
│                                                   │
│   [  Black  ]  [  Blue  ]   [  Red  ]  [ Green ] │
│   [         ]  [Turquoise]  [ Yellow]  [Hilight] │
│   [Dark Blue]  [  Gray  ]   [ Orange]  [ Brown ] │
│   [ Purple  ]  [Dark Green] [Dk Turquoise] [   ] │
│                                                   │
│              [ Default Colors ]                   │
│   ┌──────────────┐          ┌──────────┐         │
│   │     OK       │          │  Cancel  │         │
│   └──────────────┘          └──────────┘         │
└─────────────────────────────────────────────────┘
```
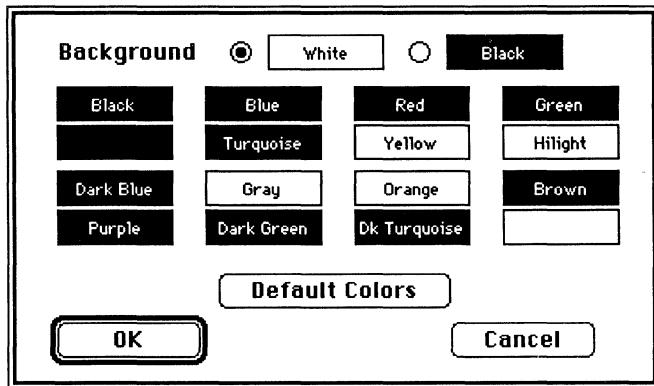
To change the way a color appears on the Macintosh, click its color block and MMF will display the Macintosh color wheel, which you can use to change the color as you wish.

To restore the colors to their MMF defaults (MMF's best approximation of their appearance on an IBM monitor), click the Default Colors button.

Graphics Font Feature

When you select Graphics Font... from the MMF Graphics Option Settings menu, you'll see this dialog box:

```
┌─────────────────────────────────────────────────┐
│                                                   │
│   Please choose the Macintosh font to            │
│   use in place of the host font.                 │
│                                                   │
│   Graphic Font  [  Armonk        ▼ ]             │
│                                                   │
│      ┌──────────────┐   ┌──────────┐             │
│      │     OK       │   │  Cancel  │             │
│      └──────────────┘   └──────────┘             │
└─────────────────────────────────────────────────┘
```
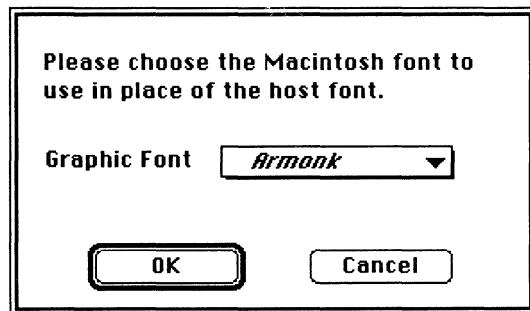
The pop-up menu contains the Armonk font plus all the fonts that are currently in your Macintosh System:

```
┌─────────────────────────────────────┐
│                                     │
│  Please choose the Macintosh font to │
│  use in place of the host font.      │
│                                     │
│  ┌──────────────┬──────────────┐    │
│  │Graphic Font  │ Armonk       │    │
│  ├──────────────┼──────────────┤    │
│                 │ Chicago      │    │
│                 │ Courier      │    │
│                 │ Geneva       │    │
│  ┌──────────┐   │ Helvetica │ncel │ │
│  │    OK    │   │ Monaco       │    │
│  └──────────┘   │ Times        │    │
│                 └──────────────┘    │
└─────────────────────────────────────┘
```
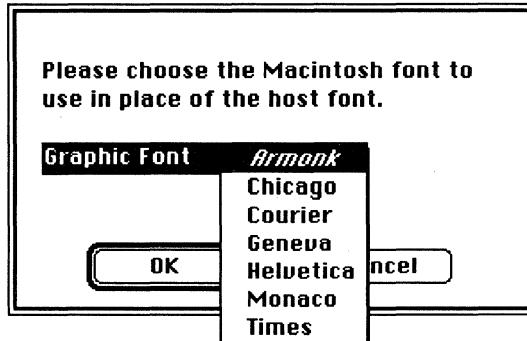
Select a new font and then click OK, or cancel your selection and close the box by clicking Cancel.

More Session Classes on Servers

MMF 4.0/5.0 supports up to 64 LU session classes on a single MMF Gateway Server. This means on a 64-session MMF GW Server, you can have 64 one-session classes.

To create session classes, as usual you can:

•   Select New Class... from the Server Control application's Administer menu or

•   Double click on one of the classes in the Classes: scroll window in the Class Information dialog box.

For complete information on creating, editing, and deleting LU session classes, please see your MMF *Gateway Server Administrator's Guide.*

Running MMF Client on a MMF Gateway Server Machine

When your MMF Gateway Server is running MMF 4.0/5.0, you can also start up the MMF Client application.

What You Need First

To allow your Server to also run a MMF GW Client, check the Allow Client on Server machine check box, which appears in the Server Parameters box in the Server Control application:

```
═══════════════ Server Parameters ════════════════

Server Name:    │MacMainFrame™ Server                    │

Maximum Sessions per User:    │8  │

Inactivity Timeout in minutes:    │0  │

Logging Level:   ● Full ○ Errors Only ○ None

Logfile Name:   │Server Log File        │   ☐ Append logfile

New check box →  ☐ Allow Client on Server machine

Classes:                        Language:
┌─────────────────┐┌─┐         ┌─────────────────┐┌─┐
│Model-2          ││⇧│         │US EBCDIC        ││⇧│
│Model-2 EAB      │├─┤         │US ASCII         │├─┤
│Model-3          ││ │         │Austrian/German  ││ │
│Model-3 EAB      ││ │         │Belgian          ││ │
│Model-4          ││⇩│         │Brazilian        ││⇩│
└─────────────────┘└─┘         └─────────────────┘└─┘
```
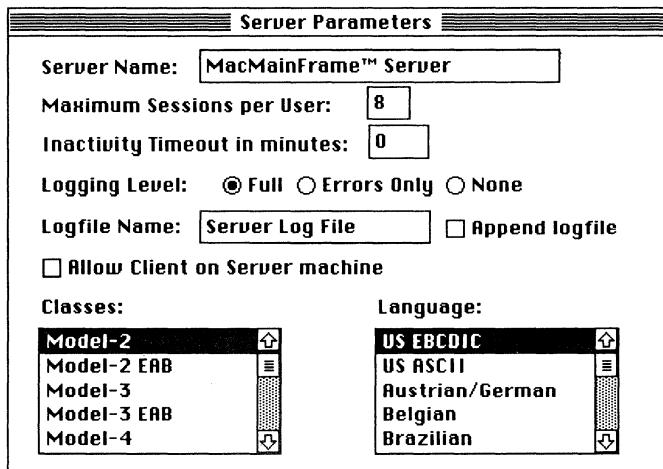
How to Use The Server-Resident Client

Use MMF Client as you normally would. To select a Server, go to the Chooser. You can even select another Server elsewhere on the AppleTalk network.

IMPORTANT: On all Servers, any undue activity on the Server, particularly holding down the mouse or formatting disks, delays all traffic for all Clients connected to that Server.

Also, when outlying Clients on a Server perform large file transfers, this can slow all activities for the user on that Server, regardless of what application that user is running.

Alternate Paste Method

MMF 4.0/5.0 offers two paste methods.

- The Paste command (or ⌘ V), and

- The SHIFT-Paste command (or ⌘SHIFT-V).

The two methods work slightly differently depending on whether or not the pasted data contains carriage returns (CRs). Briefly, when you're pasting data that contains CRs, and you use SHIFT-Paste instead of Paste, and you're pasting to an unformatted screen area (as opposed to a formatted screen), MMF aligns the left edge of the pasted data to the first column in which you paste. Otherwise, the two methods work the same.

The following sections provide a more detailed explanation of pasting.

With No Carriage Returns (CRs) In Data

If the 3270 window is formatted into fields. Both paste methods – Paste and SHIFT-Paste – give the same result: MMF pastes the data starting at the cursor, restarting at the next unprotected field, and wrapping to the next line when necessary to get to the next field. The result could look like this:

```
             Aaaa            aaa    a a
             aaaa                   aaa
aaaaaaa                      aa a
             aaaaa   aa aaaaaa   aaa
aaaa    aaa a aa        aaaa
             aa aa           a
             aaa
```

If the 3270 window lets you type anywhere. Both paste methods – Paste and SHIFT-Paste – give the same result: MMF pastes the data starting at the cursor, wrapping to the next line and restarting at the left margin when the current line is filled. The result would look like this:

```
             Aaaaaaaaaaaaaaaaaaaaa
aaaaaaaaaaaaaaaaaaaaaaaaaaa
aaaaaaaaaaaaaaaaaaaaaaaaaaa
aaaaaaaaaaaaaaaaaaaaaaaaaaa
aaaaaaaaaaaaaaaaaaaaaaaaaaa
aaaaaaaaaaaaaaaa
```

With Carriage Returns (CRs) In Data

If the 3270 window is formatted into fields. Both paste methods – Paste and SHIFT-Paste – give the same result: MMF pastes the data starting at the cursor, restarting at the next unprotected field, and wrapping to the next line when necessary to get to the next field:

```
          Aaaa              aaa    a a
          aaaa                     aaa
     aaaaaaa                 aa a
          aaaaa  aa aaaaaa   aaa
     aaaa  aaa a aa          aaaa
          aa aa              a
          aaa
```

If the 3270 window lets you type anywhere -

- The Paste (or ⌘ V) method works the same as before: MMF pastes the data it has starting at the cursor, and after a CR it wraps to the next line and <u>restarts at the left margin:</u>

```
          Aaaaaaaaaaaaaaaaaaaaaa
     aaaaaaaaaaaaaaaaaaaaaaaaaaa
     aaaaaaaaaaaaaaaaaaaaaaaaaaa
     aaaaaaaaaaaaaaaaaaaaaaaaaaa
     aaaaaaaaaaaaaaaaaaaaaaaaaaa
     aaaaaaaaaaaaaaaa
```

- The SHIFT-Paste (or ⌘ SHIFT-V) method works slightly differently than before – MMF pastes the data it has starting at the cursor, and after a CR it wraps to the next line and <u>restarts in the column where it began pasting.</u> The result would look like this:

```
          Aaaaaaaaaaaaaaaaaaaaaa
          aaaaaaaaaaaaaaaaaaaaa
          aaaaaaaaaaaaaaaaaaaaa
          aaaaaaaaaaaaaaaaaaaa
          aaaaaaaaaaaaaaaaaaaa
          aaaaaaaaaaaaaaaaaaaaa
          aa
```

Putting Carriage Returns (CRs) In Your Data

To have MMF include carriage return (CR) characters in the data you plan to paste from another MMF 3270 window:

1.   Check the Add carriage returns at line ends box. (This check box is in the Copy Options dialog box, which is available under the MMF Special Settings menu.)

2.   Copy the data using the MMF Copy Table command (which is in the Edit menu).

Support For File Transfer In TOSS Environments

MMF 4.0/5.0 can transfer files to and from TOSS environments, as well as to and from environments that use IND$FILE software to transfer files.

To enable MMF to transfer files in TOSS environments, use the TOSS items in the File Transfer panel, which is in the new MMF Special Settings menu. No other adjustments to MMF are necessary for MMF to upload and download these files.

PA3 Key For DFT

MMF 4.0/5.0 offers both a PA3 key on DFT (multisession) keyboards and a TEST key on CUT (single-session) keyboards. Earlier versions of MMF offered only a TEST key. The PA3 key and the TEST key occur in the same position on the MMF keyboard.

NOTE: The actual key that gives the PA3 or TEST function will vary somewhat depending on the Macintosh keyboard you're using.

To find these two key functions:

On CUT Workstations:

The **TEST** function normally appears near the lower right corner of the Function Keys pull-down menu:

Home	PA2	Test
→	↑	↓
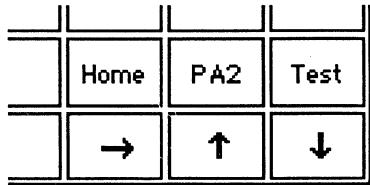
TEST also appears in the upper panel in the Keyboard Configuration dialog box:

PA1	Tab
PA2	Test
↑	↓
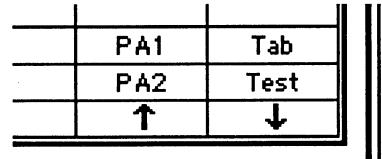
On DFT Workstations and MMF GW Clients:

You'll see a **PA3** function in the same positions the TEST key was in:

Home	PA2	PA3
→	↑	↓

PA1	Tab
PA2	PA3
↑	↓
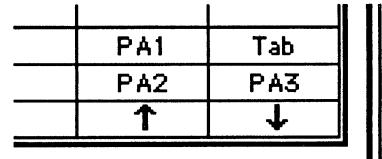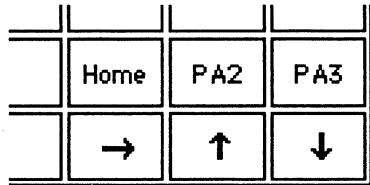
Special Settings Menu

The Special Settings menu offers specialized settings that pertain to various aspects of MMF operation.

How to Use the Menu

To get to the Special Settings menu, hold down the OPTION key and then pull down the Settings menu. Special... now appears in the menu:

```
Settings
  Session...
  Host...
  Graphic Colors...
  Graphic Font...
  ........................................
  Keyboard...
  ........................................
  Reset Session
  . Special...
```

Select Special..., and MMF will display the first panel of the Special Settings dialog box:

```
Special Settings:    Alarm          ▼

3270 Alarm Sounds

      ☐ Disable sound

          [    OK    ]      [ Cancel ]
```
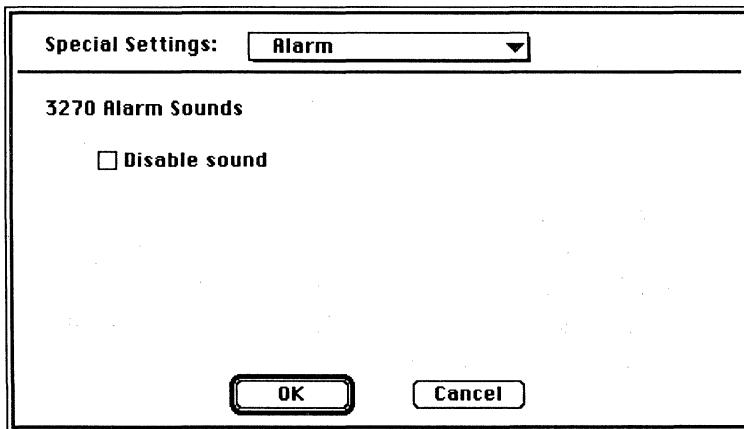
To get to the other panels, use the pop-up menu at the top of the box:

```
┌────────────────────────────────────────────────────────┐
│ ╔══════════════════════════════════════════════════╗   │
│ ║                    ┌──────────────────────┐       ║   │
│ ║ Special Settings:  │ █Alarm█              │       ║   │
│ ║                    │ Connect              │       ║   │
│ ║ ───────────────────│ Copy    ─────────────│───────║   │
│ ║ 3270 Alarm Sounds  │ Cursor               │       ║   │
│ ║                    │ File Transfer        │       ║   │
│ ║      ☐ Disable sou │ Full Screen Model 4  │       ║   │
│ ║                    │ Graphic Cursor       │       ║   │
│ ║                    │ Window Preferences   │       ║   │
│ ║                    └──────────────────────┘       ║   │
│ ║                                                    ║   │
│ ║                                                    ║   │
│ ║                                                    ║   │
│ ║         ╔═══════════╗     ┌──────────┐            ║   │
│ ║         ║    OK     ║     │  Cancel  │            ║   │
│ ║         ╚═══════════╝     └──────────┘            ║   │
│ ╚══════════════════════════════════════════════════╝   │
└────────────────────────────────────────────────────────┘
```
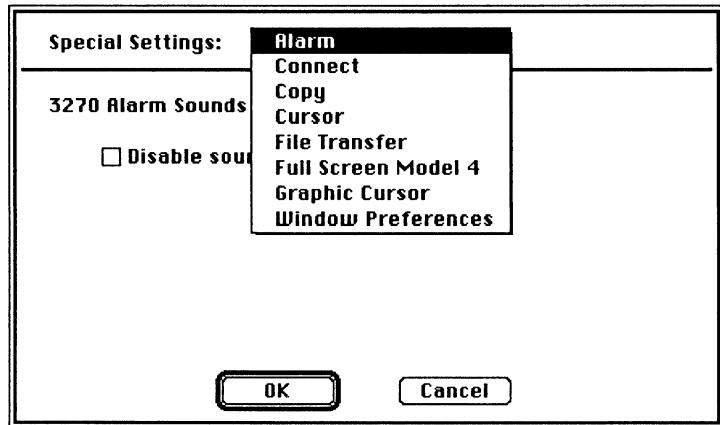
The following sections describe all the Special Settings panels and their items in more detail.

Alarm

These settings affect the IBM sounds that can occur when you're working in a 3270 window.

```
┌─────────────────────────────────────────────────────────────┐
│                                                               │
│   Special Settings:  ┌─ Alarm ─────────────── ▼┐              │
│                      └───────────────────────────┘            │
│   ──────────────────────────────────────────────────         │
│   3270 Alarm Sounds                                           │
│                                                               │
│        ☐ Disable sound                                        │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│               ╔═══════════╗    ┌───────────┐                  │
│               ║    OK     ║    │  Cancel   │                  │
│               ╚═══════════╝    └───────────┘                  │
│                                                               │
└─────────────────────────────────────────────────────────────┘
```
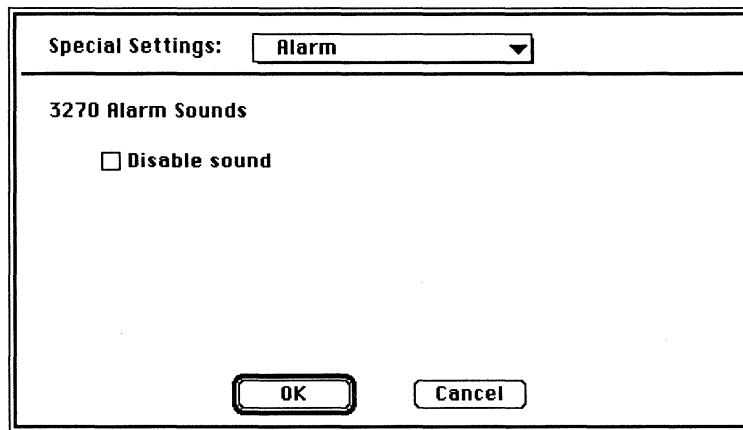
3270 Alarm Sounds

☐ Disable sound When this box is checked, MMF shuts off the 3270 alarm that the host can send when you're working in a 3270 window.

Checking this box does not shut off other sounds, for example MMF error messages, messages from other applications, etc.

Connect

These settings affect the way MMF manages connections to the IBM host.

```
┌─────────────────────────────────────────────────────┐
│  Special Settings:  ┌─ Connect          ▼ ┐          │
│  ───────────────────────────────────────────────     │
│                                                       │
│                                                       │
│     ☐ Disconnect from host after Quitting             │
│                                                       │
│                                                       │
│                                                       │
│                                                       │
│                ┌────── OK ──────┐   ┌─ Cancel ─┐      │
│                                                       │
└─────────────────────────────────────────────────────┘
```

☐ Disconnect from host after Quitting When this box is checked,
when you select Quit from MMF's File menu, MMF disconnects all LU
sessions from the IBM host before shutting down.

The default (box not checked) is to leave the LU sessions connected; this
lets MMF reconnect to them quickly.

Copy

These settings affect the way MMF copies data in the 3270 window.

```
┌─────────────────────────────────────────────────────────────┐
│  Special Settings:  [  Copy                    ▼ ]          │
│  ─────────────────────────────────────────────────────────  │
│  Copy                                                        │
│         ☐ Add Carriage Returns at line ends                  │
│         ☐ Strip leading Spaces                               │
│         ☐ Strip trailing Spaces                              │
│  ─────────────────────────────────────────────────────────  │
│  Copy Table                                                  │
│            ☒ Add Carriage Returns at line ends               │
│            ☒ Strip leading Spaces                            │
│            ☒ Strip trailing Spaces                           │
│     Define Tab-Delimited Fields By:                          │
│     ○ Inserting Tabs between Attributed fields               │
│     ◉ Substituting a Tab for at least [2] spaces between chars│
│              [      OK      ]    [  Cancel  ]                │
└─────────────────────────────────────────────────────────────┘
```
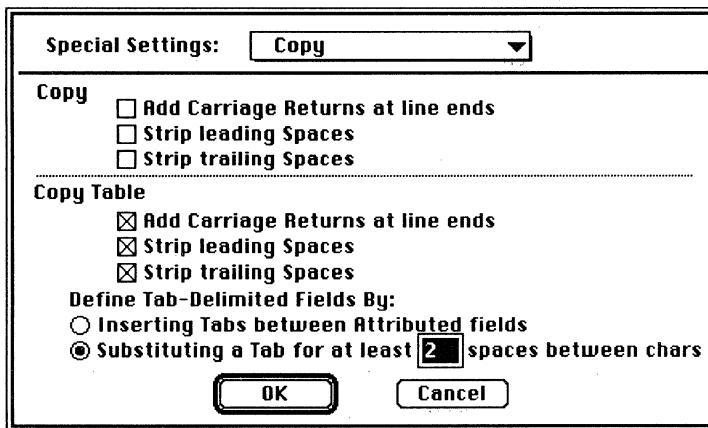
Copy

These boxes offer various modifications to data that you copy from a MMF 3270
window using the simply Copy command:

☐ Add Carriage Returns at line ends – When this box is checked,
MMF adds a Carriage Return character to the end of each IBM line.
☐ Strip leading spaces – When this box is checked, MMF removes
spaces from the left end of the IBM line.
☐ Strip trailing spaces – When this box is checked, MMF removes
spaces from the right end of the IBM line.

Copy Table

These boxes offer modifications to data that you copy from 3270 windows when you
use the Copy Table command:

☒ Add Carriage Returns at line ends – When this box is checked,
MMF adds a Carriage Return character to the end of each IBM table row.
☒ Strip leading spaces – When this box is checked, MMF removes
spaces from the left end of the IBM table row.
☒ Strip trailing spaces – When this box is checked, MMF removes
spaces from the right end of the IBM table row.

The following radio buttons let you specify how Copy Table will reproduce the information it copies.

Define Tab-Delimited Fields By:

○ Inserting Tabs between Attributed Fields – MMF will insert a TAB between attributed fields that it detects; this insertion takes place in MMF's copy of the data. MMF won't insert TABs within fields.

◉ Substituting a Tab for at least **2** spaces between chars – MMF will substitute a TAB wherever it finds the number of spaces specified in the edit field (default = 2 spaces); this substitution takes place in MMF's copy of the data. This may result in MMF inserting TABs within fields.

Cursor

These settings affect MMF's emulation of the IBM text cursors.

```
┌─────────────────────────────────────────────────────────────┐
│  ┌───────────────────────────────────────────────────────┐  │
│  │  Special Settings:  │ Cursor          ▼ │              │  │
│  │  ───────────────────────────────────────────────────  │  │
│  │  Choose Cursor's Position With:                       │  │
│  │      ● Click  ○ Option-Click  ○ Command-Click         │  │
│  │  Position Cursor at:   ○ Mouse position               │  │
│  │                        ● First unprotected position   │  │
│  │  ···················································  │  │
│  │  Position Cursor and Send this   │ Curs Sel    ▼ │    │  │
│  │  AID Key with:                                        │  │
│  │      ○ Click  ● Option-Click  ○ Command-Click         │  │
│  │  ···················································  │  │
│  │  Choose Light Pen's Position                          │  │
│  │      ○ Click  ○ Option-Click  ● Command-Click         │  │
│  │         ┌──────────┐    ┌──────────┐                  │  │
│  │         │    OK    │    │  Cancel  │                  │  │
│  │         └──────────┘    └──────────┘                  │  │
│  └───────────────────────────────────────────────────────┘  │
└─────────────────────────────────────────────────────────────┘
```
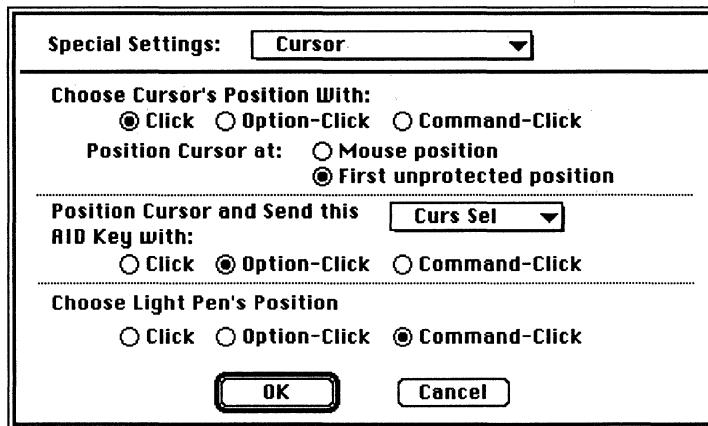
These radio buttons let you specify how MMF positions the cursor in the 3270 window:

Choose Cursor's Position With:
      ● Click   ○ Option-Click   ○ Command-Click

These buttons let you specify where MMF positions the cursor in the 3270 window.

Position the cursor at:
      ○ Mouse position
      ● First unprotected position

This item lets you select an AID key from the pop-up and specify a mouse-key event on which MMF should send that AID key to the IBM host.

Position cursor and send   │ Enter   ▼ │
this AID key with:
      ○ Click   ● Option-Click   ○ Command-Click

These buttons let you specify the way MMF positions the cursor in the 3270 window when the cursor is acting as a light pen:

Choose Light Pen's Position With:
    ⭕ Click   ⭕ Option-Click   ⦿ Command-Click

NOTE: The standard light pen AID key is Cursor Select.

File Transfer

These settings affect the way MMF transfers files to and from the IBM host.

These settings affect all transfers of all files to and from all IBM environments.

```
┌─────────────────────────────────────────────────────┐
│  Special Settings:  │ File Transfer        ▼ │        │
│ ─────────────────────────────────────────────────── │
│  ☐ Support file transfer using TOSS                  │
│  ☐ Transfer files in keystroke mode                  │
│ ....................................................... │
│  ☐ Add commands to all Upload commands:              │
│    ┌───────────────────────────────────────────┐    │
│    │ │                                           │    │
│    └───────────────────────────────────────────┘    │
│  ☐ Add commands to all Download commands:            │
│    ┌───────────────────────────────────────────┐    │
│    │ │                                           │    │
│    └───────────────────────────────────────────┘    │
│ ....................................................... │
│  Assign This Creator Type To                         │
│  Downloaded Text Files:    │ MacWrite      ▼ │        │
│                                                       │
│         ┌───────────┐     ┌──────────┐               │
│         │    OK     │     │  Cancel  │               │
│         └───────────┘     └──────────┘               │
└─────────────────────────────────────────────────────┘
```
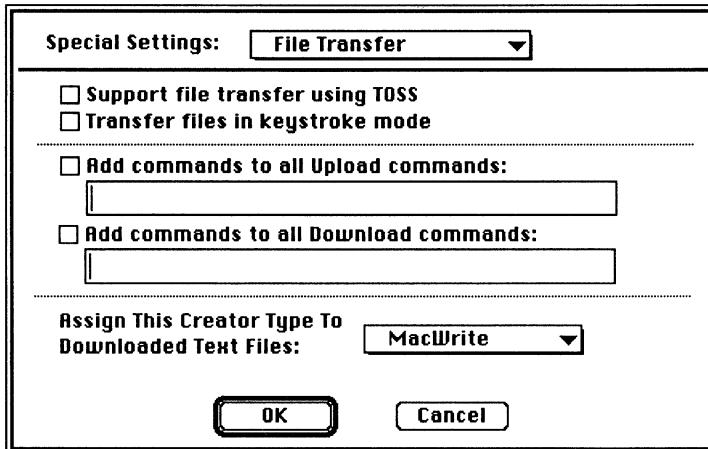
File Transfer Options

☐ **Support file transfer using TOSS** When this box is checked, MMF can transfer files to and from a TOSS environment.

When transferring files under TOSS, MMF gives no indications other than normal messages that it is doing so.

NOTE: The IBM host must be running IBM host file transfer software for MMF to be able to transfer files to and from a TOSS environment.

☐ **Transfer files in keystroke mode** When this box is checked, MMF transfers the given file as if it were being typed at the keyboard.

This is useful when your MMF product is operating in CUT (i.e., single-session) mode and is connected to a non-IBM control unit.and a block-mode file transfer is not feasible.

☐ Add commands to all Upload commands:

```
┌─────────────────────────────────────────────┐
│                                             │
└─────────────────────────────────────────────┘
```

☐ Add commands to all Download commands:

```
┌─────────────────────────────────────────────┐
│                                             │
└─────────────────────────────────────────────┘
```

When these boxes are checked, MMF adds the commands in the edit box to each Upload or Download command line that it constructs. (You can see MMF's Upload and Download command lines by first capturing them in a batch file. Use the Batch File... selection in the MMF File menu and the Batch button at the bottom of the Upload or Download dialog box.)

Here's an example of a command line that MMF built to transfer a file called TEST.TST to a CICS environment:

```
IND$ TEST.TST TEST TST A1(ASCII CRLF)
```

If we check the Add commands check box, type QTEMP into the edit box, and then request the same file transfer again, MMF constructs the command line this way:

```
IND$ TEST.TST TEST TST A1(ASCII CRLF QTEMP)
```

For complete information on IBM commands, please see your original IBM documentation.

Assign This Creator Type To
Downloaded Text Files:

```
┌──────────────────┐
│ MacWrite         │
├──────────────────┤
│ MS Word          │
│ ⋯⋯⋯⋯⋯⋯⋯⋯⋯ │
│ User Defined...  │
└──────────────────┘
```
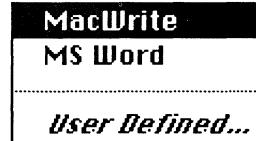
The selections in this pop-up cause MMF to label downloaded files with types of Macintosh applications that would normally create and/or use the files.

The *User-defined...* selection in this pop-up lets you select an application type from your own Macintosh - and add that application type to the pop-up.

1.   Pull down the pop-up and select *User-defined...* . MMF then
      displays a file box:

```
┌─────────────────────────────────────────────┐
│  ┌─────────────────────┐                      │
│  │ 🗁 Various MMF ▼ │                         │
│  ┌──────────────────────────┐                 │
│  │ 🗇 MacMainFrame 3287    ⬆ │  ⊂⊃ JHB-40    │
│  │ 🗇 MacMainFrame Checker   │                │
│  │ 🗇 MacMainFrame Graphics 3.4b1 │  ┌────────┐ │
│  │ 🗇 MacMainFrame Workstation │  │ Eject  │ │
│  │ 🗀 Printing fonts          │  ┌────────┐ │
│  │ 🗇 TeachText               │  │ Desktop │ │
│  │                            │               │
│  │                          ⬇ │  ┌────────┐ │
│  └──────────────────────────┘  │ Select │ │
│                                 ┌────────┐ │
│                                 │ Cancel │ │
└─────────────────────────────────────────────┘
```
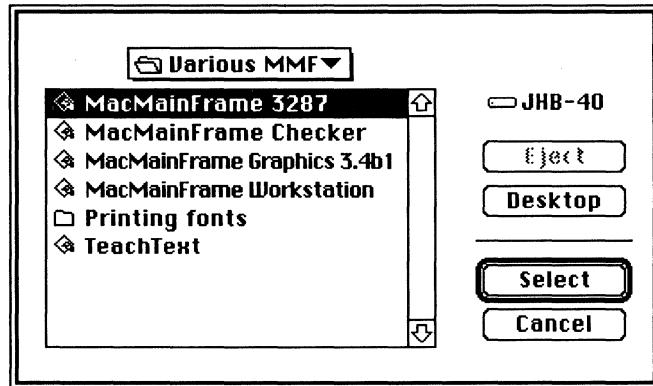
2.   To select a Creator Type, double-click an application that creates
      files of that type (or select the application and then click the Select
      button).

      NOTE: Make sure that application is not currently locked.

MMF will apply that application's type to the downloaded file, and it will add
the type to the pop-up.

Full Screen Model 4 Options

These settings let MMF make adjustments for data that is meant to be displayed on Model 4-type terminals, which have tall screens.

```
┌─────────────────────────────────────────────────────────┐
│                                                          │
│  Special Settings:    [ Full Screen Model 4    ▼]        │
│  ──────────────────────────────────────────────────────  │
│                                                          │
│                                                          │
│     ☐ Use special 9 point font                           │
│                                                          │
│                                                          │
│                                                          │
│                                                          │
│              ┌──────────┐   ┌──────────┐                 │
│              │    OK    │   │  Cancel  │                 │
│              └──────────┘   └──────────┘                 │
│                                                          │
└─────────────────────────────────────────────────────────┘
```
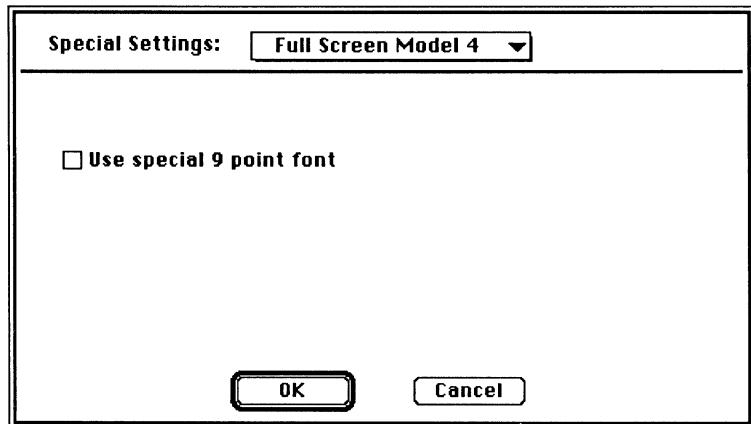
☐ Use special 9 point font When this box is checked, MMF will use a 9 point font that is shorter than its normal 9 point font. This allows a full Model 4 screen of data to appear on a standard Apple 13-inch RGB monitor.

Graphic Cursor

These settings affect MMF's emulation of the IBM graphics mouse and graphics cursors.

```
┌─────────────────────────────────────────────────────────┐
│  Special Settings:  │ Graphic Cursor      ▼ │            │
│  ─────────────────────────────────────────────────────   │
│  Send Left Button Of Graphics Mouse After:              │
│  ⦿ Click    ○ Option-Click    ○ Command-Click           │
│  ⊠ Send AID Key with left button:    │ Enter      ▼ │   │
│  ·······································································  │
│  Send Center Button of Graphics Mouse After:            │
│  ○ Click    ○ Option-Click    ⦿ Command-Click           │
│  ⊠ Send AID Key with center button:  │ Enter      ▼ │   │
│                                                          │
│           [    OK    ]      [ Cancel ]                   │
└─────────────────────────────────────────────────────────┘
```
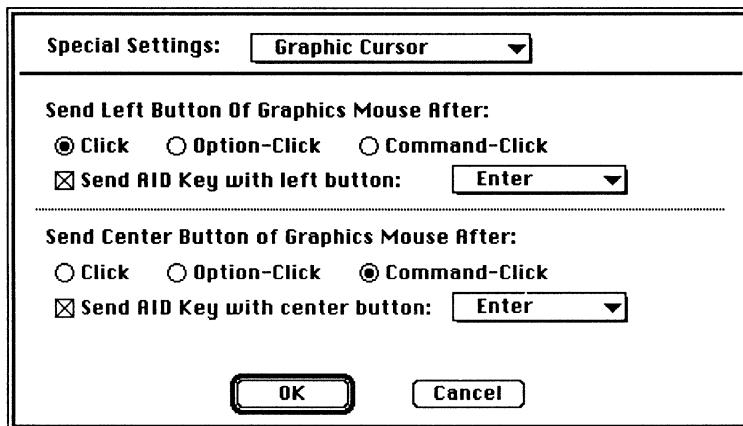
These items let you specify how MMF will send the left and center buttons of the IBM graphics mouse

When a box is checked, MMF also sends the AID key that appears in the pop-up menu when the mouse/key event occurs.

Send Left Button Of Graphics Mouse After:

    ⦿ Click   ○ Option-Click   ○ Command-Click

    ☐ Send AID Key with left button: │ Enter   ▼ │

Send Center Button Of Graphics Mouse After:

    ○ Click   ○ Option-Click   ⦿ Command-Click

    ☐ Send AID Key with center button: │ Enter   ▼ │

Window Preferences

These settings affect the way MMF displays the given LU session's 3270 window and the data in the window.

```
┌─────────────────────────────────────────────────────────┐
│  ┌───────────────────────────────────────────────────┐  │
│  │  Special Settings:    │ Window Preferences ▼ │      │  │
│  ├───────────────────────────────────────────────────┤  │
│  │  Window Preferences For Session: │ 1 ▼ │           │  │
│  │                                                     │  │
│  │     □ Hide Window Frame                             │  │
│  │     ⊠ Show intense fields in Bold                   │  │
│  │     □ Show NULLs or SPACEs in unprotected fields as:│  │
│  │     ⊠ Override Default Window Title with:           │  │
│  │       ▐Untitled:1          ▌                        │  │
│  │                                                     │  │
│  │              ┌────────┐    ┌──────────┐             │  │
│  │              │   OK   │    │  Cancel  │             │  │
│  │              └────────┘    └──────────┘             │  │
│  └───────────────────────────────────────────────────┘  │
└─────────────────────────────────────────────────────────┘
```

NOTE: The default setting for the "Override Default Window Title with:" item is *not checked.* We've checked it here to show the edit field.

Use this pop-up menu to select the LU session whose window preferences you want to change:

Window Preferences For Session: │ 1 ▼ │

☐ Hide window's frame – When this box is checked, MMF hides the 3270 window's frame, which includes the various Macintosh-related features such as scroll bars, etc. This, in turn, lets more 3270 data appear.

NOTE: MMF always displays the IBM status line, whether or not this box is checked.

☐ Show intense fields in bold When this box is checked, MMF displays in boldface the contents of fields that have the intense attribute.

NOTE: For black&white monitors only. On color monitors, MMF shows intense fields in a different color.

☐ Show NULLs or SPACEs in unprotected fields as ____ When this box is checked, MMF will fill in each SPACE or null in unprotected fields with the character you supply. For example, if you typed in a ~ (tilde) here, MMF would display a five-NULL unprotected field as ~~~~~. Supply any single printing ASCII character.

☐ Override the default titles for 3270 windows with: ____ When this box is checked, MMF will title this 3270 window with the phrase you supply. This lets you name your windows differently – Tom, Dick, Harry – instead of Tom:1, Tom:2, etc.

Publish & Subscribe

Available Under Macintosh System 7.0 Only.

System 7.0's Publish & Subscribe feature lets Macintosh applications move data to and from each other; this communication is essentially direct and does not require continual user intervention. For complete information on how Apple's Publish & Subscribe feature works, please see your original Apple System 7.0 documentation.

How MMF Publish & Subscribe Works

MMF lets you make Publish & Subscribe connections between MMF 3270 windows and other applications that are running on your Macintosh.

The MMF Publish & Subscribe features are available in the MMF Edit menu:

```
Edit
  Undo              ⌘Z
  ...............................
  Create Publisher...
  Publisher Options...
  Create Subscriber...
  Subscriber Options...
  ...............................
  Show Borders
```
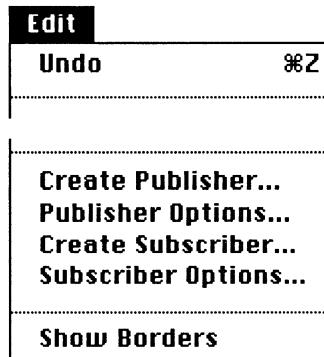
There are two ways to set up the Publish & Subscribe relationship for your MMF 4.0/5.0 applications:

1) You can have MMF Workstation or Client contain a **publisher,** which is an area in a 3270 window that gets published for use by other applications, and

2) You can have it be a **subscriber.** in which case it receives data at the cursor from a publisher - actually from an intermediate file published by a publisher.

As mentioned, the medium of exchange between publishers and subscribers is the **edition file** - publishers publish edition files, and subscribers subscribe to them.

What Kind of Data Can You Publish And Subscribe To?

Subscribers – MMF subscribers accept text data. Regardless of the special formatting or graphics that may occur in the edition file, what arrives at the cursor in a MMF subscriber window is plain ASCII text.

Publishers – MMF publishers publish plain ASCII text with the exception of MMF Graphics. MMF Graphics can publish either text, graphics, or both, depending on the layers that are active in the MMF Graphics publisher.

How Much Can You Publish And Subscribe?

You can have MMF publish out of more than one 3270 window at the same time, you can have MMF subscribe into more than one 3270 window at the same time, and you can have MMF be publishing and subscribing at the same time.

There can be only one subscriber per 3270 window and one publisher per 3270 window.

How To Create A Subscriber In MMF

To create a subscriber in a MMF application, follow these steps:

1.   Pull down the MMF Edit menu and select Create Subscriber... .

   MMF displays the following Macintosh dialog box:

```
┌─────────────────────────────────────────────────────────────────┐
│                                                                   │
│  ┌──────────────────┬─────────────────────────────┐  ⊂⊃ Hobbes   │
│     Preview         │  🗂 Edition Manager  ▼                      │
│                     ├─────────────────────────────┤  ┌─────────┐  │
│  Test Data   12345  │ ▢ Folder1                ⬆  │  │  Eject  │  │
│  TEST DATA   54321  │ ▢ File1                      │  └─────────┘  │
│  test data   00000  │ ▢ File2                      │  ┌─────────┐  │
│  TeEsT DaTa  99999  │ ▢ File3                      │  │ Desktop │  │
│  tEsT dAtA   12345  │ ▢ File4                      │  └─────────┘  │
│                     │                              │  ┌─────────┐  │
│                     │                              │  │ Cancel  │  │
│                     │                          ⬇  │  └─────────┘  │
│                     └─────────────────────────────┘  ┌─────────┐  │
│                                                      │Subscribe│  │
│                                                      └─────────┘  │
└─────────────────────────────────────────────────────────────────┘
```
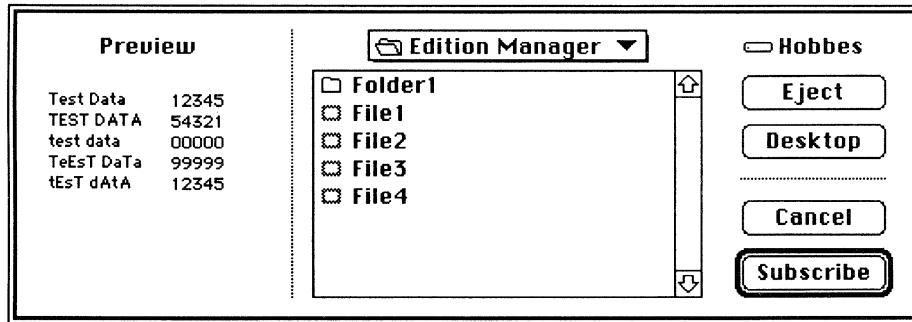
2.   Use the items in this box to select an edition file to subscribe to.

   After you click Subscribe, MMF creates the subscriber.

3. After creating a subscriber, select the way the subscriber will receive new editions. Pull down the MMF Edit menu again and select Subscriber Options... .

MMF displays the following Macintosh dialog box:

```
Subscriber to:  [☐ test          ▼]
┌─Get Editions: ──────────────────────┐   ┌─────────────────────┐
│  ○ Automatically                    │   │  Cancel Subscriber  │
│  ◉ Manually     [  Get Edition Now ]│   └─────────────────────┘
│                                     │   ┌─────────────────────┐
│  Latest Edition:   Wednesday, April 3, 1991 5:59:47 PM │   │   Open Publisher    │
└─────────────────────────────────────┘   └─────────────────────┘
                                           [ Cancel ] [   OK   ]
```
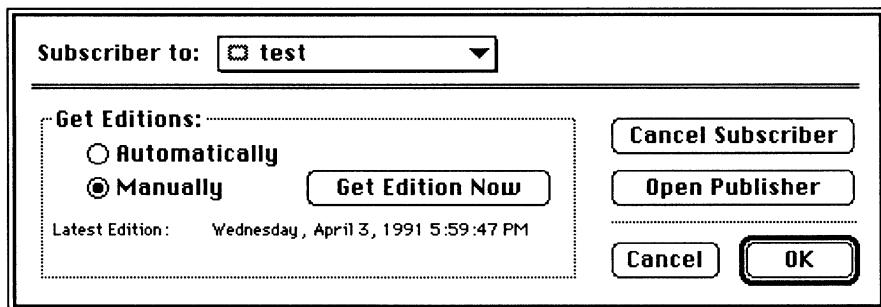
4. See the Subscriber to: pop-up menu for the edition file's current location.

5. Specify how you will receive new editions by using the Get Editions buttons:

   • Automatically gives the subscriber a new edition each time the publisher updates the edition file, and each time you click the Get Edition Now button.

   • Manually gives the subscriber a new edition each time you click the Get Edition Now button.

   • Get Edition Now button gives the subscriber a new edition immediately, regardless of how the radio buttons are set.

   REMEMBER: The new edition will come in wherever the cursor in your current 3270 window is positioned.

6. Click OK when you're satisfied with the way your subscriber will receive new editions.

   Otherwise, click Cancel and MMF will discard any changes you made and revert to the previous method of delivering editions.

To stop a 3270 window from being a subscriber any longer, click the Cancel Subscriber button.

To track down the publisher that is updating the edition file, click the Open Publisher button.

How To Create A Publisher In MMF

To create a publisher in a MMF application window, follow these steps:

1. Select an area in the current 3270 window that you want to be the publisher -
    use the cursor to drag across a section of the window, or use Select Screen
    from the MMF Edit menu to select the whole window.

2. Pull down the MMF Edit menu and select Create Publisher... .

    MMF displays the following dialog box:

    ```
    ┌─────────────────────────────────────────────────────────────────┐
    │                                                                   │
    │     Preview          ┌ Edition Manager ▼ ┐      ▭ Hobbes          │
    │                     ┌──────────────────────┐⬆                     │
    │   RS      IS    R1  │                      │        ┌ Eject ┐      │
    │   CHAHOED LOB   A1  │                      │        └───────┘      │
    │   CHARS   TEST  R1  │ ▢ Folder1            │      ┌ Desktop ┐      │
    │   EATEST  DATA  A1  │                      │      └─────────┘      │
    │   EATEST  EXEC  R1  │                      │                       │
    │   EP9I9TAT FILE A1  │                      │      ┌ New ▢ ┐        │
    │   GUESTS  AUTSPROF R1│                     │      └───────┘        │
    │   GUESTS  NETLOG AD │                      │⬇                      │
    │                     └──────────────────────┘     ┌ Cancel ┐       │
    │                      Name of new edition:        └────────┘       │
    │                     ┌──────────────────────┐     ┌ Publish ┐      │
    │                     └──────────────────────┘     └─────────┘      │
    └─────────────────────────────────────────────────────────────────┘
    ```
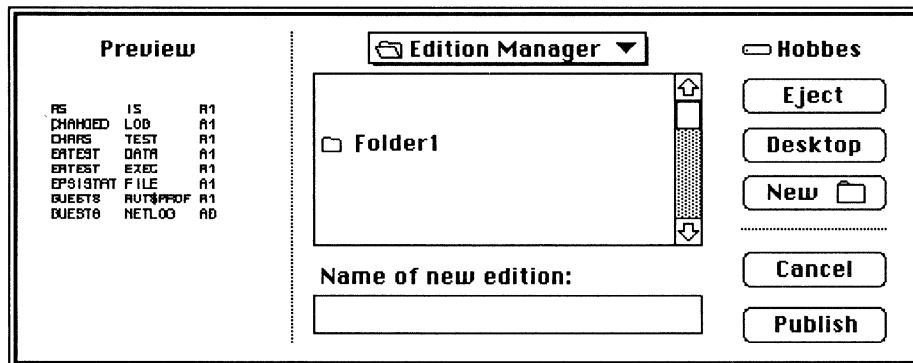
3. Use the items in this box to select an edition file to publish to.

    After you click Publish, MMF creates the publisher.

4. After creating a publisher, select the way this publisher will publish new
    editions. Pull down the MMF Edit menu again and select Publisher
    Options... .

    MMF displays the following Macintosh dialog box:

    ```
    ┌─────────────────────────────────────────────────────────────────┐
    │                                                                   │
    │   Publisher to:  ┌ ▢ line1             ▼ ┐                        │
    │                  └─────────────────────────┘                      │
    │   ─────────────────────────────────────────────────────────────  │
    │   ┌ Send Editions: ─────────────────┐                             │
    │   │  ○ On Save                      │   ┌ Cancel Publisher ┐      │
    │   │  ● Manually    ┌ Send Edition Now ┐ └──────────────────┘      │
    │   │                └──────────────────┘                           │
    │   │  Latest Edition:  Friday, April 5, 1991 4:42:57 PM            │
    │   │                                       ┌ Cancel ┐ ┌ OK ┐       │
    │   └─────────────────────────────────────┘ └────────┘ └────┘       │
    └─────────────────────────────────────────────────────────────────┘
    ```
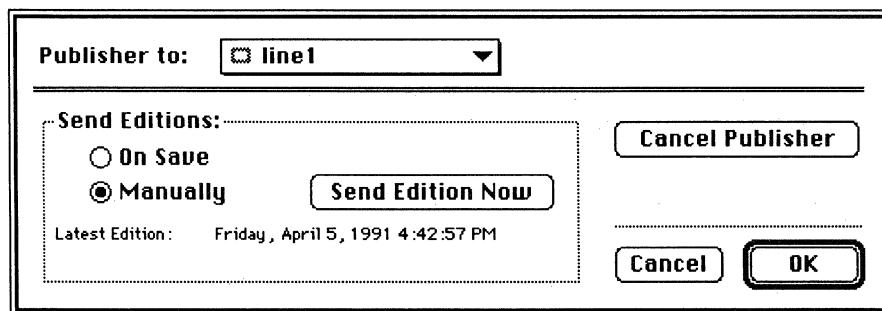
5. See the the Publisher to: pop-up menu for the edition file's current location.

6. Specify how this publisher will publish new editions by using the Send Editions buttons:

   • On Save publishes a new edition each time you save the current Session Settings document, and each time you click the Get Edition Now button.

   NOTE: Save here causes MMF to publish all publishable areas in all 3270 windows.

   • Manually publishes a new edition each time you click the Send Edition Now button.

   • The Send Edition Now button publishes a new edition immediately, regardless of how the radio buttons are set.

7. Click OK when you're satisfied with the way your publisher will publish new editions.

   Otherwise, click Cancel and MMF will discard any changes you made and revert to the previous method of publishing editions.

To stop an area from being a publisher any longer, click the Cancel Publisher button.

How MMF Handles Publish & Subscribe Data

MMF handles Publish & Subscribe data differently depending on whether you are using plain text data, as you would with MMF Workstation or MMF GW Client, or you are using text data and graphics data, as you would with MMF Graphics Option.

Plain Text Data

All the MMF applications – MMF Workstation, MMF GW Client, and MMF Graphics Option – let you publish and subscribe to plain text data.

MMF treats plain text data it **publishes** the same way it treats plain text data it copies:

• MMF converts all white space (SPACEs, TABs) to SPACEs, and does not insert any extra carriage return (CR) characters, plus

• MMF also follows the current settings in the Copy Options dialog box, which modify the above conventions. (Copy Options appears in the Special Settings menu.)

MMF treats the text data it **subscribes** to the same way it treats the text data it pastes:

- MMF pastes the data at the current cursor position.

Text Data And Graphics Data

Only MMF Graphics Option lets you work with both text and graphics data. With MMF Graphics Options, you can:

- Publish both text and graphics data
- Subscribe to text data.

When you subscribe to text data, MMF Graphics Option works the same as the other MMF applications.

When publishing data, MMF Graphics works differently than the other MMF applications:

- If **no graphics data is visible**, MMF publishes any text in the publisher area as TEXT. (Your MMF layer selector icons will all be grayed when no graphics are visible.)
- If **graphics data is visible**, there are three possibilities:

If you select this layer:	(Icon in the layer selector palette:)	MMF will publish:
ALL layers		GRAPHICS + TEXT
GRAPHICS layer only		GRAPHICS
TEXT layer only		TEXT

Borders of Publishers

The basic Macintosh Publish & Subscribe software normally displays a border around an area that's currently set up to be a publisher.

```
Here's a publisher. The
border lies at the edge
of the publisher area.
```

MMF 4.0/5.0 lets you hide this border if you wish and then restore it to view. To do so, select the Show Borders/Hide Borders item in the MMF edit menu. (If the borders are showing, the Edit menu selection will be Hide Borders - selecting it will hide the borders and change the selection to Show Borders - and vice versa.)

NOTE: MMF shows its publishers' borders within the first few pixels of the publisher area, rather than outside the publisher area.

You Can Save Your Publish & Subscribe Settings

Once you've set up a Publish & Subscribe relationship between MMF and an edition file, you can save that relationship in a MMF Session Settings document.

When you use that Session Settings document again, MMF will reestablish the subscription and/or publication to the appropriate edition files. Edition files persist across MMF restarts as well as Macintosh restarts and power-downs.

What About Deleted Publishers and Subscribers?

When you cancel a publisher or subscriber, MMF puts the cancellation into effect right away.

In the case of publishers, MMF will also try to delete the associated edition file.

- If the Session Settings document is new (never been saved) and no subscribers are currently reading the edition file, MMF will delete the edition file when you close the 3270 window where the publisher resided.

- If the Session Settings document isn't new, MMF won't delete the edition file until the next time you save the Session Settings document.

See the next section for information on cancelling publishers and subscribers.

How To Delete Publishers and Subscribers

To stop an area in a 3270 window from being a publisher any longer:

1. Go to the 3270 window where the publisher occurs.

2. Pull down the MMF Edit menu and select Publisher Options... .

3. Click the Cancel Publisher button.

MMF will also delete the associated edition file, either right away if this is a new (never been saved) Session Settings document, or if it isn't a new document, the next time you save the document.

To stop a 3270 window from being a subscriber any longer:

1.   Go to the 3270 window that is the subscriber.

2.   Pull down the MMF Edit menu and select Subscriber Options... .

3.   Click the Cancel Subscriber button.

Restricted LU Classes

Introduction

This feature lets you restrict the use of your MMF 4.0/5.0 Gateway Server's LU session classes to a small number of MMF Clients according to information that resides on the Client machine(s). Using these restrictions, you can restrict an LU Session class so that only one Client can use the LU sessions in that class.

These restrictions work regardless of whether other Clients are on the same LAN, how many other Clients know the Server's name, or even how many other Clients know the class's password.

To restrict the use of a MMF LU session class, you use the Server Control application to record certain information about the Client(s). You record this information in the Server Control's Class Information dialog box. The information that you can record is:

- A user name, which the Client user also records in the Client Chooser.

- The Client's current network address, for example its Token-Ring address or Ethernet address.

- The Client's "unique Client ID", which you, the Server Administrator, supply.

How The Restrictions Work

Briefly, to restrict the use of a session class, the Server checks each Client that requests LU session classes. If the Client's information matches the requested class's information, the Server lets the Client use LU sessions from the class. If the information doesn't match, the Server simply continues to inform the Client of available LU sessions in available classes.

Benefits of Restricted LU Classes

Restricting an LU session class to a single Client lets you give that Client special access to that class's LU sessions:

Guaranteed Access – As long as you don't give the sessions in that class to any other Client, you can guarantee the Client can always get the LU sessions in that class (assuming the sessions are available from the host).

Security – You can prevent other users, who try to use one Client's same physical terminal or who try to contact the Server with the same Chooser user name, from using that Client's LU sessions.

Multiple Restricted Classes – You can construct several different classes for the same Client. This lets you give the Client a variety of session types – for example terminal, printer, and graphics, or Model 2, Model 3, Model 4 – again, that the Client can always get since no other Clients have access to the classes.

Overall Security

If you're using these restrictions to create secure working environments, you should also restrict access to the tools that set and clear these restrictions:

•	The Server machine itself	Physically secure the machine.
•	The Server Control application	Remove this software from the Server machine.
•	The MMF Checker application, which can be run on the Client.	Remove this software from the Client and Server machines.

How To Set Up Restrictions

To restrict an LU session class to a single MMF Client:

1. You must obtain information about the Client, and

2. You must supply this information to the class itself, which you do by using the Server Control application.

The following sections explain how to do this.

1. Obtaining Information From The Client

You'll need to decide which information to base your restrictions on. The choices are:

Chooser user name –   Software-specific security

Network address –   Hardware-specific security, especially for Token-Ring
                      and Ethernet LANs

Unique Client ID –   Hardware-specific security, especially for LocalTalk
                      LANs

The following sections explain these choices in more detail.

Chooser Name

The Chooser name is the name the Client user supplies in his or her own Chooser.

- In Macintosh System 6.0, users can supply this name in the Chooser dialog:
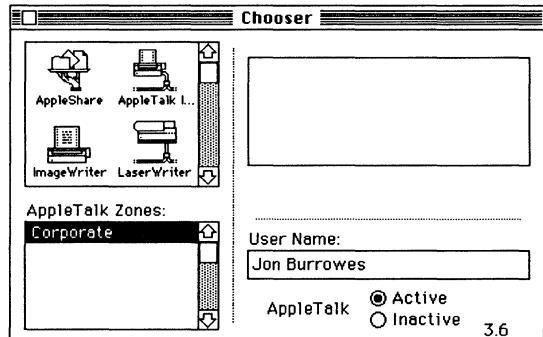
- In Macintosh System 7.0 to use certain Chooser choices, for example an AppleShare server:
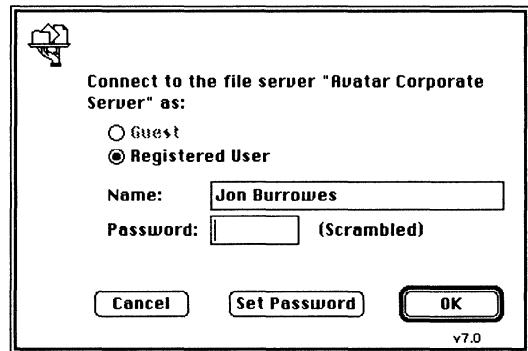
REMEMBER: Client users can change their own Chooser user names at will and can thus use user names that may give them unauthorized access to LU session classes and LU sessions.

Network Address

The Network Address varies according to the kind of LAN to which the Clients are connected.

- **Token-Ring LANs** - Network Address is what the Token-Ring board is currently using as a Token-Ring address, and there are two choices here:

- Burned-In Address (Some LANs call this the hardware address, the permanent address, etc.)

- Locally Administered Address (Some LANs call this the software address.)

To determine which address the Client will use (and therefore which address the Server will check for), you must run the MMF Checker on the Client and go to the Checker's Token-Ring parameters panel, which is available in the Checker's Control menu.

- To have the Client use the Burned-in Address, set the Locally Administered Address to NULL/Zero.

- To have the Client use the Locally Administered Address, set the Locally Administered Address to anything but NULL/Zero.

Avatar	Set Token-Ring Parameters:

Slot: ○ 9 ◉ A ○ B ○ C ○ D ○ E

Burned-In Address: 00013F1B1500

Locally Administered Address: `400000000027`

Ring Speed: ◉ **4 Mbps** ○ **16 Mbps**

Host's Address: `400000000001`

XID – Physical Unit Block: `017`

XID – Terminal ID: `00001`

Maximum I-Frame Size (bytes): `4015`

[Cancel]   [OK]
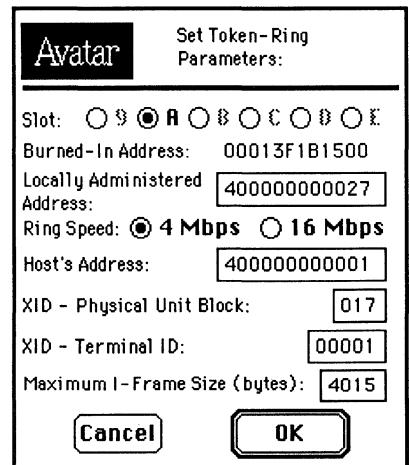
- **Ethernet LANs** – Network Address is the Ethernet address. Ethernet addresses are 12 hexadecimal digits in length.

- **LocalTalk LANs** – The network address is not static and can change from day to day. Instead, use a Unique Client ID. Unique Client IDs are described in the next section.)

Unique Client ID

The Unique Client ID is an alphanumeric value that you, the Server Administrator, set at the Client by running the Checker application on the Client.

The Unique Client ID is useful in LocalTalk environments as a class restriction criterion, since LocalTalk network addresses are not static and may change from day to day.

Here's how you supply the unique Client ID to the Client:

1. Start the Checker on the desired Client.

2. Go to the Checker's
   Control Menu.

```
┌─────────────┐
│ Control     │
├─────────────┴───────────┐
│ Connect to DH...        │
│ Configure DH...         │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Driver Status...        │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Hardware Status...      │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Configure Token-Ring... │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Set Unique Client ID... │
└─────────────────────────┘
```

3. Select Set Unique
   Client ID... .

4. The Checker will display
   this dialog box:

5. In the edit box, type in a
   unique alphanumeric
   string.

   This value may be up to
   12 characters in length.
   Range: A - Z, a - z, 0 - 9.

```
┌─────────────────────────────────────────┐
│              Set Unique Client ID        │
│                                          │
│  Unique Client ID:  │[              ]    │
│                                          │
│  ○ Show only restricted classes.         │
│  ● Show restricted and unrestricted classes. │
│                                          │
│    [ Cancel ]            (( OK ))         │
│                                          │
└─────────────────────────────────────────┘
```
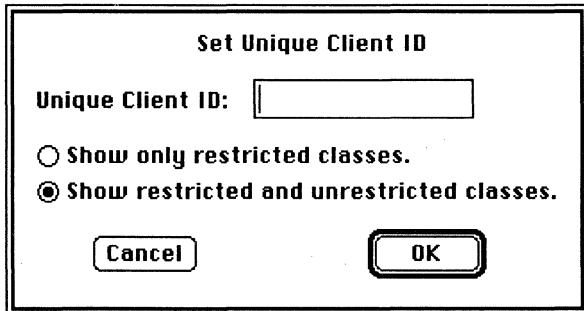
Optionally, you may also select the way this Client displays available classes by using the radio buttons:

○ Show only restricted classes. Means the Client will display only the classes to which it has have access

◉ Show restricted and unrestricted classes. Means the Client will display all classes on the current Server.

IMPORTANT: These radio buttons apply to all restrictions types, not just the Unique Client ID.

No Restriction

You can also elect not to restrict access to the class. To do so, select "No Restriction" from the pop-up menu (in the Class Information dialog box).

The "No Restriction" selection also removes the restrictions that the other selections might have invoked, and treats the data you might have typed in for those restrictions as follows:

• Zeroes out network addresses.

• Leaves Chooser name as is.

• Leaves Unique Client ID as is.

Any Client can now get LU sessions from this class (assuming that the Client supplies a valid password if necessary and that there are LU sessions available from the host).

Note that you can still use the class password to restrict access to the class.

2. Setting Up The Restrictions On The Server

Go to your MMF Gateway Server(s), select or create the LU Sessions classes that the Clients will be using, and use the information you collected in the previous step to create the restrictions. The steps below explain how to do this.

1. Start the Server Control application running on your Server.
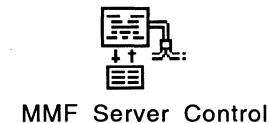
MMF Server Control

2. Pull down the Server Control's Administer menu and select either **New Class...** or **Edit Class...** .

Administer	
New Class...	⌘N
Edit Class...	⌘E
Delete Class...	⌘D
Password...	
LU Numbers...	
Token-Ring Parameters...	
SDLC Parameters...	
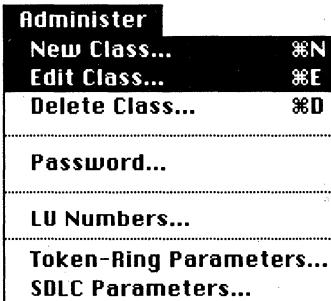
Server Control will then display the Class Information dialog box:

3. Make sure you've got the class you want. If necessary, fill in the class's correct name in the **Class Name** edit box.

Class Information

Class Name: [ ]

Device Type: ● Terminal   ○ Printer

Screen Size: ● 24×80 (2)   ○ 32×80 (3)
             ○ 43×80 (4)   ○ 27×132 (5)

Attributes: ● Base   ○ EAB   ○ APA

Password: [ ]

Restrict Class Access by: [No Restriction]

[Assign LUs to Class]

[OK]   [Cancel]
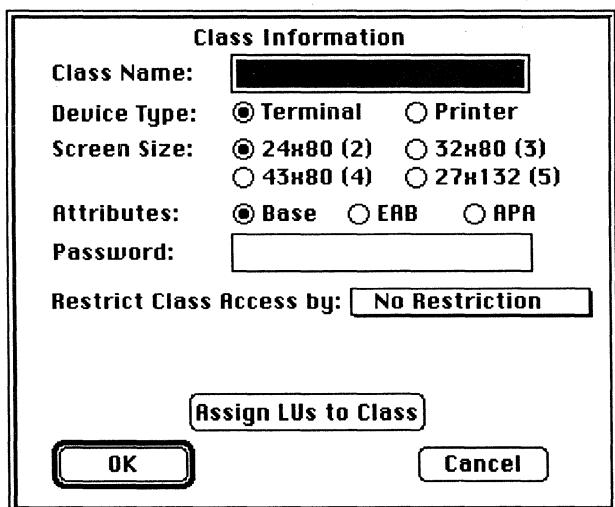
4. Pop up the
   **Restrict Class
   Access by:** pop-up
   menu. You'll see the
   choices of information
   by which you can
   restrict this class:

→

```
┌─────────────────────────────────────────────┐
│          Class Information                    │
│  Class Name:    ▐███████████████████▌         │
│  Deuice Type:   ◉ Terminal    ○ Printer       │
│  Screen Size:   ◉ 24н80 (2)   ○ 32н80 (3)     │
│                 ○ 43н80 (4)   ○ 27н132 (5)    │
│  Attributes:    ◉ Base  ○ EAB    ○ APA         │
│  Password:      ▐                   ▌          │
│  Restrict Class Access by:  No Restriction     │
│                             Chooser Name       │
│                             Network Address    │
│                             Unique Client ID   │
│            [Assign LUs to Class]               │
│     [    OK    ]            [  Cancel  ]        │
└─────────────────────────────────────────────┘
```
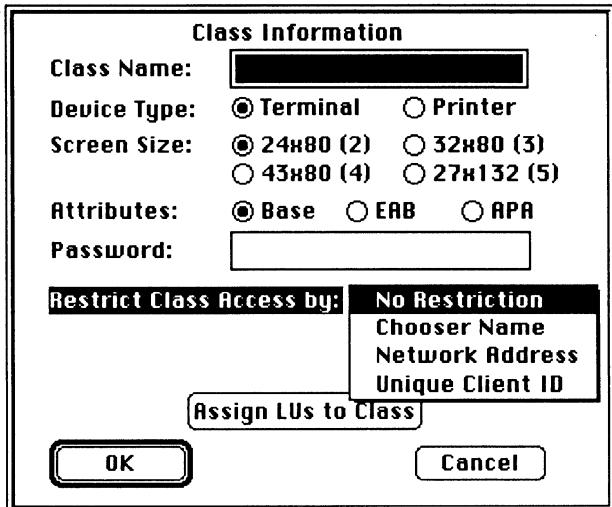
5. Select one of the Restrict Class Access items and supply the appropriate information.

   NOTE: Obtain this information by going to the Clients to which you're going to give access and recording it from them.

   The Server Control application will reject your input if the information is incorrect. For example, if you supply a non-hexadecimal digit as part of a hexadecimal network address, Server Control will beep and await a valid digit.

6. Click **OK** to put your new settings into effect and close the dialog box, or click **Cancel** to discard any changes you've made and close the dialog box.

REMEMBER: Make sure the class contains the LU sessions you want it to contain.

To assign LU sessions to LU session classes, click the Assign LUs to Class button, which is at the bottom of the dialog box:

```
┌──────────────────────────────────────────┐
│       [Assign LUs to Class]               │
│   [    OK    ]        [  Cancel  ]         │
└──────────────────────────────────────────┘
```
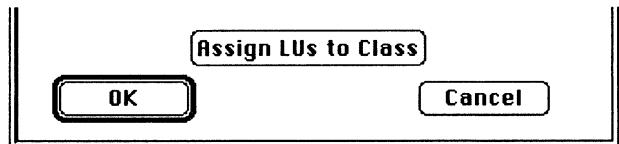
Server Control will then display a
Member LU panel:

```
                    Assign
    2    3    4    5    6    7    8    9
  ┌────┬────┬────┬────┬────┬────┬────┬────┐
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  │    │    │    │    │    │    │    │    │
  └────┴────┴────┴────┴────┴────┴────┴────┘

      ( Cancel )          (   OK   )
```
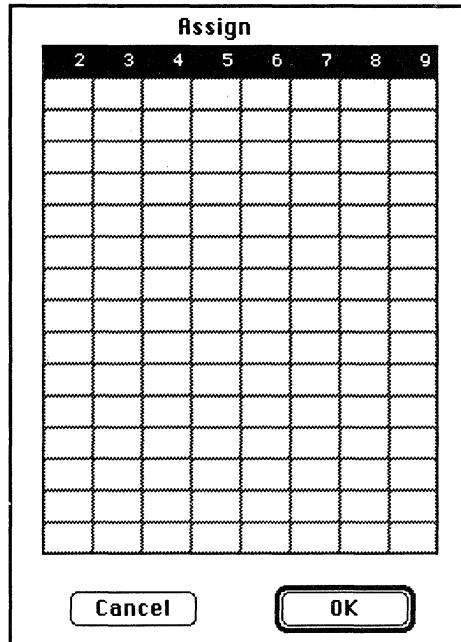
For complete information on assigning LUs to LU session classes, see Chapter 6 in
the MacMainFrame Series *Gateway Server Administrator's Guide.*

The following sections show how to set each kind of restriction.

No Restriction

Set this restriction by selecting
No Restrictions in the
Restrict Class Access pop-up
menu:

```
┌─────────────────────────────────────────────┐
│              Class Information                │
│ Class Name:    │Model-2 EAB            │      │
│ Device Type:   ◉ Terminal    ○ Printer        │
│ Screen Size:   ◉ 24н80 (2)   ○ 32н80 (3)      │
│                ○ 43н80 (4)   ○ 27н132 (5)     │
│ Attributes:    ○ Base  ◉ EAB    ○ APA         │
│ Password:      │                      │       │
│ ▐Restrict Class Access by:▐ ✓No Restriction   │
│                              Chooser Name     │
│                              Network Address  │
│                              Unique Client ID │
│              [Assign LUs to Class]            │
│   ┌─────────┐                 ┌──────────┐    │
│   │   OK    │                 │  Cancel  │    │
│   └─────────┘                 └──────────┘    │
└─────────────────────────────────────────────┘
```
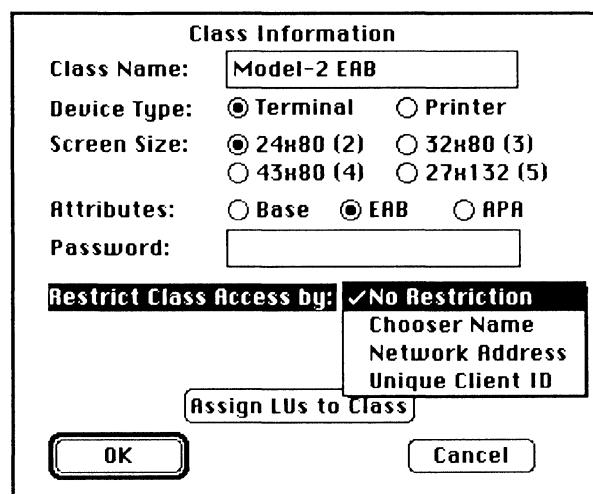
Chooser Name

Set this restriction by selecting
Chooser Name in the
Restrict Class Access pop-up
menu:

```
║ ▐Restrict Class Access by:▐  No Restriction   ║
║                              Chooser Name     ║
║                              Network Address  ║
║                              Unique Client ID ║
║              [Assign LUs to Class]            ║
║   ┌─────────┐                 ┌──────────┐    ║
║   │   OK    │                 │  Cancel  │    ║
║   └─────────┘                 └──────────┘    ║
```
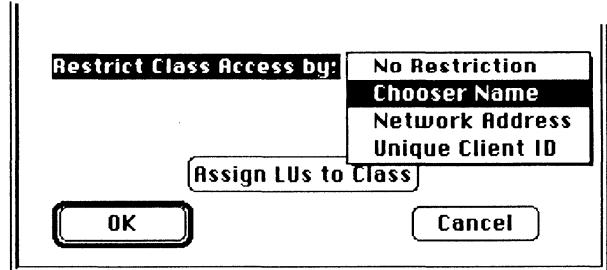
In the Chooser Name edit
field, type the name as it
appears in the Client user's
Chooser.

```
║ Restrict Class Access by: │  Chooser Name  │  ║
║                                               ║
║ Chooser Name        │                   │     ║
║              [Assign LUs to Class]            ║
║   ┌─────────┐                 ┌──────────┐    ║
║   │   OK    │                 │  Cancel  │    ║
║   └─────────┘                 └──────────┘    ║
```
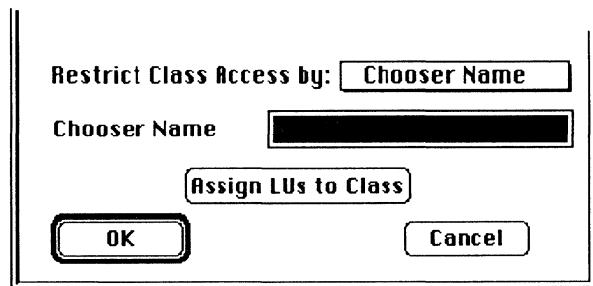
Network Address

Set this restriction by selecting Network Address in the Restrict Class Access pop-up menu:

Restrict Class Access by:
No Restriction
Chooser Name
Network Address
Unique Client ID

Assign LUs to Class

OK   Cancel
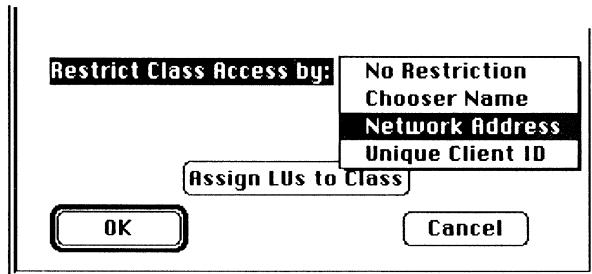
Type a valid network address in the Network Address edit field.

Restrict Class Access by: Network Address

Network Address

Assign LUs to Class

OK   Cancel
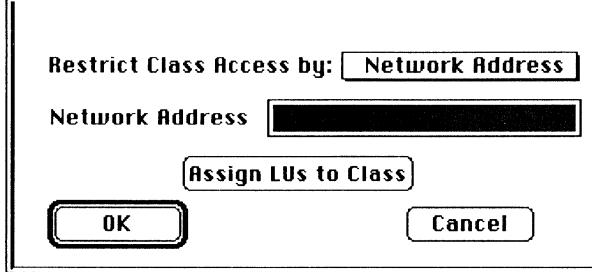
REMEMBER: The Network Address varies according to the kind of LAN to which the Clients are connected. For more information, see the section "Obtaining Information From The Clients" above. For complete information about your LAN, see your network administrator.

Unique Client ID

Set this restriction by selecting Unique Client ID in the Restrict Class Access pop-up menu:

Restrict Class Access by:
- No Restriction
- Chooser Name
- Network Address
- **Unique Client ID**

Assign LUs to Class

[OK]   [Cancel]
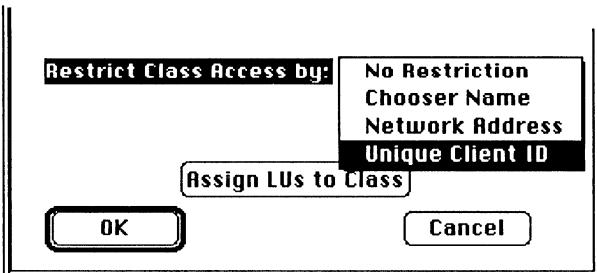
Type a valid ID in the Unique Client ID edit field. Valid IDs can be up to 12 alphanumeric characters in length. Range: A - Z, a - z, 0 - 9.

Restrict Class Access by: [Unique Client ID]

Unique Client ID [▐]

Assign LUs to Class

[OK]   [Cancel]
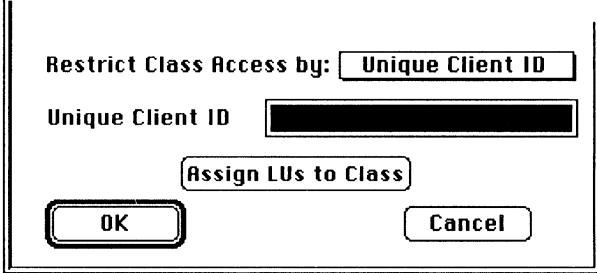
REMEMBER: You must set the Unique Client ID on the Client by running the Checker application on the Client. For complete information on setting the Client ID, see the section "Obtaining Information From The Clients" above.

Security Precautions

While the restricted LU session class features provide some specific security measures, you should also remember the following:

You Can Assign An LU Session To More Than One Class

Assigning an LU session to more than one LU session class is part of basic MMF Gateway Server functionality; it lets you give your Client users access to as wide a selection of LU sessions as possible.

When you double-assign LU sessions in a restricted class environment, in most cases MMF warns you about the double-assignment and asks you to confirm it:

- Assigning an LU session from a restricted class to another restricted class:

> ✋ **Warning: One or more LUs in this restricted class are accessable from other classes (for example, LU2).**
>
> [**OK**]   [Cancel]
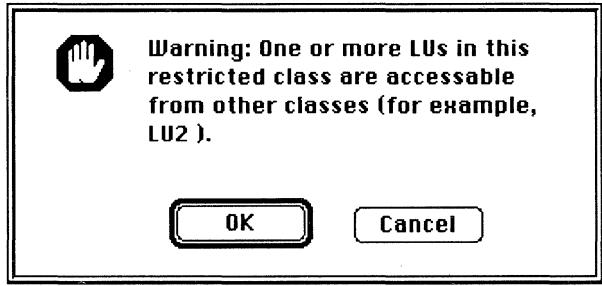
- Assigning an LU session from a restricted class to an unrestricted class.

Server Control **DOES NOT ISSUE A WARNING.**

- Assigning an LU session from an unrestricted class to a restricted class.

> ✋ **Warning: One or more LUs in this restricted class are accessable from other classes (for example, LU2).**
>
> [**OK**]   [Cancel]
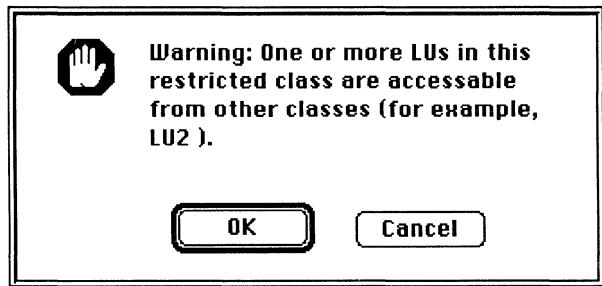
If you click OK in the Warning box, Server Control will make the double assignment. It will also allow Client users access to the classes, providing the Clients meet any restriction criteria.

IMPORTANT: If the result of this double-assignment is that the LU session now belongs to an unrestricted class, any Client user can then get access to the session via that class, *even if the LU session also belongs to a restricted class.*

This could result in the LU session's regular user(s) not being able to get an LU session one day because another user got it first via an unrestricted class. On the other hand, if other users only used the unrestricted class on off hours, the session's regular user(s) might never find out that the session had now become open to unrestricted use.

To avoid this problem, we suggest you assign LU sessions to all your *unrestricted* classes first, then carefully assign LU sessions to your restricted classes. If you assign your restricted classes first, you may accidentally double-assign a restricted LU session to an unrestricted class later, and Server Control will carry out the assignment without warning you of this double-assignment.

Macintosh Users Can Select Their Own Chooser User Names

Macintosh users specifying their own Chooser user names is part of basic Macintosh functionality.

When you restrict the use of a MMF LU session class on the basis of Chooser user name, any user who supplies that user name can then use LU sessions in that class.

You may want to use this technique to widen the access to a class to more than one user, but you may also want to use a different method to restrict access to the class.

Basic Security

Remember, MMF's restricted LU session classes are not meant to replace basic security. Whenever you use MMF's security features, you must secure the Server Control and MMF Checker applications and you should secure your MMF Gateway Server machines.

Index