MarshallSoft Client Mailer
Library for Visual FoxPro

Programmer's Manual

(MCM4FP)

Version 5.2

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1 Introduction

The **MarshallSoft Client Mailer for Visual FoxPro** provides the capability to send **personalized** email to your clients or customers **directly** from your Visual FoxPro application program.   The most current version of the **MarshallSoft Client Mailer for Visual FoxPro** can be found at
http://www.marshallsoft.com/mcm4fp.htm

The "MarshallSoft Client Mailer for Visual FoxPro Programmer Manual" contains Visual FoxPro programming specific details such as compilers, compiling and running example programs.

The **MarshallSoft Client Mailer** (MCM) functions can be called from any 32-bit Visual FoxPro program running on Win32 or Win64 systems.

Three example programs are provided. **TestMCM** displays the MCM version and related information. **SendMail** sends personalized email to a list of recipients. **GetReply** reads replies from previous sent email, updating the list of undeliverable email and updating the list of those who wish to be removed from future mailings.

The **MarshallSoft Client Mailer** runs under 32-bit and 64-bit Windows through Windows 10. The **MarshallSoft Client Mailer DLLs** (MCM32.DLL/MCM64.DLL) can also be used from any language (Visual C++, .NET, Visual Basic, VB.NET, ACCESS, EXCEL, VBA, Delphi, Visual Basic, dBASE, Xbase, etc.) capable of calling the Windows API. Win32 and Win64 DLLs are provided.

Since all programming language versions (C/C++, Visual Basic, Delphi, FoxPro, dBase, XBase) of MCM use the identical DLL (MCM32.DLL/MCM64.DLL), once one programming language version is purchased, the **MarshallSoft Client Mailer** can be used with all supported languages.

Regardless of the programming language used, both the email letter to be sent (text or HTML) and the list of recipients are standard ASCII text files. These letter files can be created with any text editor (or HTML editor for HTML files) such as Notepad. The recipient list file can be created with either a text editor, exported from a database (such as Access, FoxPro, dBase, Xbase++), email client (such as Outlook), spreadsheet (such as Excel), or created by a program such as VBA code in Access.

See Section 4 for details on the **SendMail** example program and Section 5 for details on the **GetReply** example program.

1.1 MCM Features

The features of the **MarshallSoft Client Mailer (MCM)** include:

- Send personalized email **directly** from an application, programmable database or spreadsheet.
- Uses macro substitution strings to personalize outgoing letters (Also called email merge).
- Can send plain text, rich text, or HTML formatted letters.
- Supports multiple attachments.
- Can handle arbitrarily large lists of recipients.
- Detects duplicate email addresses.
- Supports multiple lists of recipients that should always be skipped.
- Supports ASCII, UTF8, and ISO_8859 character sets.
- Supports WIN_1250, WIN_1252, and WIN_1255 character sets.
- Can use up to 32 connections simultaneously for fast email delivery.
- Can process "undeliverable mail" replies.
- Can process multiple user replies ("REMOVE", "CONFIRM", etc)
- Has extensive error detection and logging capability.
- Includes **SendMail** example program (with source) to send email.
- Includes **GetReply** example program (with source) to read replies.
- Includes **TestMCM** example program (with source) to verify installation and provide version information.
- Includes **MakeStyled** example program to create HTML email from text email.
- Implemented as a standard Windows DLL, which will work with all versions of Windows.
- Supports both 32-bit and 64-bit Windows and includes Win32 and Win64 DLLs.
- Works with 32-bit and 64-bit Windows through Windows 10.
- License includes one year of technical support and downloadable updates for the MCM DLL.
- Royalty free distribution (no run-time fees) with your compiled application
  License covers all programming languages (MCM4C, MCM4D, MCM4VB, MCM4FP, MCM4DB, MCM4XB).
- Supports all versions of 32-bit Visual FoxPro.

1.2 Documentation Set

There are five manuals in Adobe PDF format for the **MarshallSoft Client Mailer.**

- **Tutorial Manual**: Introduces the basic functionality and overview of the **MarshallSoft Client Mailer.**
- **Servers Manual**: Covers background information on SMTP & POP3 servers.
- **User Manual**: Covers information that is not programming language specific (letter & list preparation, program logic, purchasing, performance, SSL, etc.).
- **Reference Manual**: Contains details for each individual MCM function specific for each programming language (Visual FoxPro, Delphi, C/C++, VB, etc.).
- **Programmer Manual**: Contains programming language (Visual FoxPro, Delphi, C/C++, etc.) specific information such as compiling and running example programs.

The manuals can be found in the DOCS subdirectory/folder in the **MarshallSoft Client Mailer** file structure when it is installed. Note that for clarity purposes some information may have been provided in more than one manual.

- **Tutorial Manual**: mcm_tutorial.pdf or online at
  http://www.marshallsoft.com/mcm_tutorial.pdf.
- **Servers Manual**: mcm_servers.pdf or online at
  http://www.marshallsoft.com/mcm_servers.pdf.
- **User Manual**: mcm_users.pdf or online at
  http://www.marshallsoft.com/mcm_users.pdf.
- **Reference Manuals** mcm4fp_reference.pdf or
  online at http://www.marshallsoft.com/mcm4fp_reference.pdf.
- **Programmer Manuals** mcm4fp_programmer.pdf or
  online at http://www.marshallsoft.com/mcm4fp_programmer.pdf.

Links to the above manuals can also be found online on the **MarshallSoft Client Mailer for Visual FoxPro** product page

  http://www.marshallsoft.com/mcm4fp.htm

1.3 Installation

(1) Before installation of **MCM4FP**, Visual FoxPro should already be installed on your system and tested.

(2) Unzip MCM4FP52.ZIP using any Windows unzip program.

(3) Run the installation program SETUP.EXE which will install all MCM4FP files, including copying MCM32.DLL to the Windows directory. Note that no DLL registration is required.

After SETUP is run, the MCM4FP files are copied to the directory specified (default \MCM4FP). Three sub-directories are created, as follows:

```
DOCS -  Documentation files
APPS -  Examples program and files
DLLS -  MCM32.DLL
```

1.4 Uninstalling

Uninstalling MCM4FP is very easy.

First, run UNINSTAL.BAT (or UINSTALL.BAT), which will delete MCM32.DLL from the Windows directory, typically C:\WINDOWS for Windows XP through Windows 10. Next delete the MCM4FP project directory created when MCM4FP was installed.

1.5 Purchase

Refer to the MCM User's Manual (**`mcm_users.pdf`** or online at http://www.marshallsoft.com/mcm_users.pdf) for detailed purchasing information.

MCM4FP can be purchased at

http://www.marshallsoft.com/order.htm.

1.6 KeyCode and Edition Key

When a developer license is purchased, the developer will receive a new MCM32.DLL as well as a unique KeyCode for the MCM DLLs. Pass the KeyCode as the first argument to **mcmAttach**. The KeyCode will be found in the file named "keycode.fox" ". The KeyCode is 0 for the evaluation version. The KeyCode for the registered version will be unique 9 or 10 digit numbers. Note: Your KeyCode is NOT your Customer ID/Registration number.

Note that starting with Version 5.0 the Edition Code is no longer used.

2 Application Notes

2.1 Filenames

The filenames in the example programs use the following naming conventions:

- Recipient list filenames begin with "List" and end with ".txt" [e.g.: List.txt, List(Holliday).txt]
- Text letter filenames begin with "Letter" and end with ".txt" [e.g.: Letter(French).txt]
- HTML letter filenames begin with "Letter" and end with ".htm"   [e.g.: Letter(Holliday).htm]
- HTML template filenames begin with "Template" and with ".htm" [e.g.: Template(Style1Blue).htm]
- Background tile filenames begin with "Tile" and end with ".jpg" [e.g.: Tile(BrownPaper).jpg]
- Image filenames begin with "Image" and end with ".jpg" [e.g.: Image(Holliday).jpg]

2.2 Tables

Suppose that you have a table named "MyTable" with table fields "FirstName" and "LastName", and you want to copy the first and last names from the table to string variables in your FoxPro program. This is done easily by:

```
USE MyTable
* copy table fields to string variables
FirstNameString = FirstName
LastNameString = LastName
CLOSE DATABASES
```

To copy a string variable from your FoxPro program to a FoxPro table, use the REPLACE command. For example:

```
USE MyTable
* copy string variables to table fields
REPLACE FirstName WITH FirstNameString
REPLACE LastName WITH LastNameString
CLOSE DATABASES
```

2.3 Forms

MCM functions can be called from FoxPro forms in exactly the same way as from FoxPro programs. The only difference is the FoxPro code associated with the form itself.

2.4 MCM Files

mcm32.dll MCL Dynamic Link Library (DLL) file
mcm32.lib MCM Library (LIB) file
mcm32con.fox FoxPro function constants file
mcm32fun.fox FoxPro function declaration file

3 TestMCM Example Program

The **TestMCM** example program verifies that Windows can find MCM32.DLL at runtime and displays the MCM version and related information.

4 SendMail. Example Program

The **SendMail** example program sends a personalized letter to each recipient. The logic is as follows:

```
Step  1: Set configuration parameters
Step  2: Attach MarshallSoft Client Mailer
Step  3: Open the letter to be sent
Step  4: Open the list of recipients
Step  5: Open skip lists
Step  6: Connect to SMTP server
        LOOP: Step 7: Merge letter with next recipient
              Step 8: Send the mail
Step  9: Wait for all channels to complete
Step 10: Close connection on all channels
```

If you are not familiar with the above logic, read the MCM Tutorial, **mcm_tutorial.pdf,** and the MCM User's Manual, **mcm_users.pdf**.

The **SendMail** example program is very straight-forward and extensively documented. Open SendMail.prg and look through the code.

If your security software scans outgoing email, you may need to disable this feature since some security software does not handle multiple connections correctly.

5 GetReply. Example Program

The **GetReply** example program reads server and recipient replies. The logic is as follows:

```
Step 1: Set configuration parameters
Step 2: Attach MarshallSoft Client Mailer
Step 3: Open bounced email file
Step 4: Open reply files
Step 5: Connect to the POP3 server
        LOOP: Step 6: Read next reply
Step 7: Close connection to server
```

If you are not familiar with the above logic, read the MCM Tutorial, **mcm_tutorial.pdf**, and the MCM User's Manual, **mcm_users.pdf**.

The **GetReply** example program is very straight-forward and extensively documented. Open GetReply.prg and look through the code.

Delete Codes

GetReply divides incoming email into three mutually exclusive classes:

1. Failure messages ("bounced email") from the server.
2. User reply message (e.g., "REMOVE email-address").
3. Everything else.

As each email is read when **mcmReadReply** is called

```
function mcmReadReply(SubjectBuffer, BufferSize, DeleteCode)
```

the 'DeleteCode' argument specifies if an email is to be deleted after it is read.

DeleteCode	Action
1	Delete if message is a failure message
2	Delete if message is a recipient reply message
4	Delete if message is not one of the above.

The above DeleteCodes can be added. For example, pass 3 to specify that failure messages (DeleteCode = 1) and reply messages (DeleteCode = 2) are to be deleted, but nothing else. If no messages are to be deleted, use 'DeleteCode = 0'.

6 MakeStyled. Example Program

The **MakeStyled** example program reads a text email file and creates a basic HTML formatted email file.

The filename of the HTML formatted file will be the (input) text filename with ".htm" concatenated to the end of it.

7 Revision History

Version 1.0: October 20, 2010.

- The official release of MCM for Visual FoxPro.

Version 2.0: January 13, 2011

- Added MCM_GET_TIME_STAMP to mcmGetString()
- Call mcmOpenList(NULL) or mcmOpenList("") to rewind recipient list.
- mcmOpenLetter, mcmOpenList, mcmOpenBounce, mcmOpenReply, mcmOpenSkip allow both filenames and pathnames to be passed.
- Added mcmSetString(MCM_SET_CC_ADDRESS) & mcmSetString(MCM_SET_BCC_ADDRESS)
- Added MCM_GET_AUTH_VERS_MAJOR, MCM_GET_AUTH_VERS_MINOR, & MCM_GET_CID
- Added MCM_SET_DUPLICATE_DETECT and MCM_SET_SERVER_TIMEOUT.
- The DLL runs indefinitely (does not stop working after one year).
- Maintenance updates are free.
- Activation Code Server allows up to 3 concurrent users with one activation file.

Version 3.0: May 19, 2011

- <u>Removed requirement for activation code</u>!
- Added mcmUtility function.
- Maximum channels increased to 32
- Fixed problem: GetReply handles email addresses with trailing whitespace
- Added MCM_GET_CUSTOMER_ID
- Added MCM_GET_ALLOWED_CHANNELS
- Added MCM_GET_ALLOWED_LIST_SIZE
- Added MCM_GET_ALLOWED_SKIP_FILES
- Added MCM_GET_ALLOWED_REPLY_FILES
- Added MCM_GET_EDITION
- Added MCM_GET_REGISTRATION
- Allow tilde ~ and carot ^ as delimiters in recipient list file.

Version 3.1: January 26, 2012

- Added "UNSOLICITED BULK EMAIL" as bounce subject when receiving mail.
- Increased (macro delimiter) field size from 64 to 256 characters.
- Added MCM_ALLOW_EMPTY_FIELDS. Allows recipient list fields to be empty.
- Allow insertion of files by use of @@filename in recipient list file.
- Set letter substitution delimiter to backquote or backslash with mcmSetInteger(MCM_SET_MACRO_DELIMITER, delimiter).
- Example: mcmSetInteger(MCM_SET_MACRO_DELIMITER, `).
- Added mcmSetProxySSL(), which allows MCM to connect to servers requiring SSL.
- Added new merge code MCM_STAT_WITH_EMPTY_MACRO_STRING macro (1st list line) is empty.
- Added new merge code MCM_STAT_WITH_EMPTY_LIST_STRING entry in recipient list is empty.
- Added new stat code MCM_STAT_WITH_EMPTY_LIST_STRING counts "MCM_STAT_WITH_EMPTY_LIST_STRING" errors.

Version 4.0: October 16, 2012

- Added macro delimiters tilde ~, caret ^, and backquote `.
- Ignore Tab chars on list macro line unless tab is the delimiter character.
- Added MCM_GET_LAST_EMAIL_SENT to mcmGetString().
- Moved letter headers to separate header file (e.g.: letter.hdr).
- Added mcmOpenHeader() function to open header file.
- Allow comments (line starting with #) in header section of letter header files.
- Changed default macro delimiter from % (percent) to ` (backquote)
- Allow recipient list to have a single entry (no delimiters)
- Added "Header: string" to headers. Used to specify a user header.
- Fixed problem in mcmRelease - was sometimes releasing SEE prematurely.
- Option to automatically load (letter) header file:
  mcmSetInteger(MCM_AUTO_LOAD_HEADER_FILE, 1)

Version 5.0: October 24, 2014

- Fixed problem in which not all reply strings (i.e., "REMOVE") were being detected.
- Fixed problem in which comments were counted as recipients in recipient list.
- Added MCM_SMTP_ONLY and MCM_POP3_ONLY error messages
- Increased MRG_STRING_SIZE from 5000 to 65536 (64K) characters.
- Removed edition codes (no limit on list size).
- Added MCM_GET_NBR_EMAILS_DELETED to mcmGetInteger().
- Fixed problem in which incoming emails were not deleted as requested.
- Added MCM_ADD_BOUNCE_STRING to mcmSetString (adds 'bounce' subject)
- Added mcmGetString2()
- Added MCM_GET_BOUNCE_STRING to mcmGetString2()
- Fixed attachment problem when using two lists (1st w/attachment, 2nd w/o)
- Updated to SEE version 7.2.6

Version 5.1: October 3, 2016

- Fixed buffer overflow problem.
- Strings exceeding limits in recipient list are detected.
- Fixed problem with accumulating CC addresses.
- Updated to SEE version 7.4.1
- Additional details written to log file
- Added MCM_SET_RCPT_TRACE_FILE to mcmSetString() to generate file of server commands & responses.
- Added MCM_GET_LAST_RESPONSE to mcmGetString() to get last email server response.
- mcmRelease forces all files closed.
- Allow vertical bar '|' to specify multiple addresses in recipients file, as for example
- `    mailAddress, CCAddress, Attachments`
- `    mike@mike4, pam@mike4|lauren@mike4, widget_red.txt`
- Time of day added to "Today is" string written to log file
- Added new HTML templates.
- Added function mcmSearch() that searches skip files for a specified string.

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- Warnings written if MCM_LOG_OFF was selected.
- Added diagnostics to merge code.
- Added MCM_NOT_TEXT_FILE error code (as @@ files are expected to be text files).
- Fixed problem in mcmRelease in which slot 0 not freed.
- Allow '#' comments after entries in recipient macro list file.
- Updated see32.obj and see64.obj to SEE version 8.0.4.
- Writes SEE version & build to MCM log file.
- Added mcmMakeStyled() function that creates an HTML file from an ASCII text file.
- Added MakeStyled example program that calls function mcmMakeStyled().
- Added MCM_CANNOT_CREATE_FILE error code.