



Developer's Guide

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I. Introduction

Description:

The Entourage Manipulator plug-in offers functions that support bi-directional data exchange between FileMaker® and Microsoft Entourage®. With this plug-in FileMaker users are able to 'push' new records into Entourage, 'pull' records from Entourage, and modify existing records in Entourage. These operations are accomplished using FileMaker function calls from within FileMaker calculations. These calculations are generally determined from within FileMaker "SetField" or "If" script steps. For a list of the available functions and fields, please see the accompanying "Functions Guide" document.

Intended Audience:

FileMaker developers or persons, who have knowledge of FileMaker scripting, calculations and relationships as proper use of the plug-in requires that FileMaker integration scripts be created in your FileMaker solution.

Successful Integration Practices:

- 1) Read the Developer's Guide
- 2) Read the Functions Guide
- 3) Look at our FileMaker Demo and video tutorials

Demo and video tutorials can be found here: <http://www.entouragemanipulator.com>

- 4) Familiarize yourself with Entourage

Error Handling:

Any of the plug-in functions may encounter an error during processing. The function will return the string "!! ERROR!!". When an error occurs during processing, immediately call the GetLastErrorText function in order to obtain a full description of the error. This function returns the message associated with the last error. The text returned by this function helps the user to troubleshoot script or logic failures.

II. Integration Steps

Accessing and using the plug-in involves the following steps:

1) Install and Register the Plug-in

Installing the Plug-in:

The first step is to install the plug-in into FileMaker.

- 1) Quit FileMaker Pro completely.
- 2) Locate the plug-in in your download which will be located in a folder called "Plug-in". On Mac the plug-in will have a ".fmplugin" extension.
- 3) Copy the actual plug-in and paste it to the Extensions folder which is inside the FileMaker program folder. On Mac this is normally located here: Volume/Applications/FileMaker X/Extensions (Volume is the name of the mounted volume)
- 4) Start FileMaker. Confirm that the plug-in has been successfully installed by navigating to "Preferences" in FileMaker Pro, then click the "Plug-ins" Tab. There you should see the plug-in listed with a corresponding check box. This indicates that you have successfully installed the plug-in

Registration:

The next step is to register the plug-in which enables all plug-in functions.

- 5) Confirm that you have access to the internet and open our FileMaker demo file, which can be found the in "FileMaker Demo File" folder in your original download.
- 6) If you are registering the plug-in in Demo mode, then simply click the "Register the Plug-in" button and do not change any of the fields. Your plug-in should now be running in "DEMO" mode. The mode is noted in the upper right hand corner of our FileMaker Demo file on the Setup tab.
- 7) If you are registering a licensed copy, then simply enter your license number in the "LicenseID" field and click the "Register the Plug-in" button. Make sure you remove the Demo License ID and enter your registration information exactly as it appears in your confirmation email. Your plug-in should now be running in "LIVE" mode. The mode is noted in the upper right hand corner of our FileMaker Demo file on the Setup tab.

Congratulations! You have now successfully installed and registered the plug-in!

Why do I need to Register?

In an effort to reduce software piracy, Productive Computing, Inc. has implemented a registration process for all plug-ins. The registration process sends information over the internet to a server managed by Productive Computing, Inc. The server uses this information to confirm that there is a valid license available and identifies the machine. If there is a license available, then the plug-in receives an acknowledgment from the server and installs a certificate on the machine. This certificate never expires. If the certificate is ever moved, modified or deleted, then the client will be required to register again. On Mac this certificate is in the form of a plist file.

The registration process also offers developers the ability to automatically register each client machine behind the scenes by hard coding the license ID in the PCEM_Register function. This proves beneficial by eliminating the need to manually enter the registration number on each client machine. There are other various functions available such as PCEM_GetOperatingMode and PCEM_Version which can assist you when developing an installation and registration process in your FileMaker solution.

2) Authenticate to Entourage

When communicating with Entourage you must first establish what Entourage identity will be used in the current session. This is accomplished by authenticating to Entourage using the `PCEM_Authenticate (DebugOption ; optPassword)` function. Authenticate must be called once per FileMaker session. For now please pass empty strings and leave the `DebugOption` and `optPassword` parameters blank ("" ; "") as these parameters are place holders for future functionality.

If Entourage is open when the `PCEM_Authenticate` function is called, then FileMaker will simply authenticate to the currently opened Entourage session.

If Entourage is not open when this function is called, then FileMaker will open Entourage in the background and authenticate with the default Entourage identity or prompt the user to select an identity. This depends on your Entourage identity settings found in Entourage. Please note that most users typically do not have multiple Entourage identities set up on their machine.

3) Select an Entourage Folder

Now that we have authenticated to Entourage, the next step is to navigate to the desired folder in Entourage. In order to create a new record or access existing records in Entourage you must first specify the desired folder where you would like to add the new record or where the existing record to access resides.

This is accomplished by calling `PCEM_OpenFolder(FolderPath)`. The `FolderPath` parameter specifies the path to the folder from the current root folder. When the `FolderPath` is prefixed with a `'/'` then the `FolderPath` is relative to the current root folder. In other words the `'/'` indicates a subfolder. This is outlined in the examples below.

For example the following call opens the folder named "NewItems" located in the "Inbox" Folder:

- `PCEM_OpenFolder("/Inbox/NewItems")`

Another example shows the following call opens the "Calendar" Folder:

- `PCEM_OpenFolder("/Calendar")`

When the `FolderPath` is NOT prefixed with a `'/'`, then the `FolderPath` is relative to the currently opened folder.

For example you could also open the NewItems subfolder mentioned above by following two calls:

- `PCEM_OpenFolder("/Inbox")`

- `PCEM_OpenFolder("NewItems")`

It is up to the developer to "know" their location within the Entourage Tree and to know what types of records are contained in the currently opened folder. Entourage has various folder types which are: Mail, Calendar, Contacts or Address Book, Tasks, and Notes.

4) Create/Open a Record

After selecting the desired folder you can now create new records in that folder or open records in that folder.

Create a New Record:

There are two methods for creating a new record in Entourage which are:

Method 1 (Long method):

Immediately after calling PCEM_OpenFolder, call PCEM_NewRecord function and leave the parameter empty (""). If the parameter is empty than the current folder specified in the previous PCEM_OpenFolder function will be used. For example: PCEM_OpenFolder("/Tasks") followed by PCEM_NewRecord("") will create a new task record in the Task folder in Entourage.

Method 2 (Short Method):

Call PCEM_NewRecord(optModule) and specify the folder type where the new record is to be created in the optModule parameter. If you pass a parameter to PCEM_NewRecord then it is the equivalent of PCEM_OpenFolder with the parameter followed by PCEM_NewRecord. For example, PCEM_NewRecord(Tasks) will create a new task record in the Task folder in Entourage.

Anytime the PCEM_NewRecord function is called the plug-in creates a new record and holds it in memory. This function also closes the currently open record without saving any changes. Records do not actually exist in Entourage until the record is properly saved. It is up to you to properly save the record using PCEM_SaveRecord before beginning another command. Properly saving records is discussed later in this document.

Open an Existing Record:

There are two methods for accessing existing Entourage records which are directly or indirectly.

Directly:

If the user knows the EntourageID of the desired record, then they can open that record directly by calling the PCEM_OpenRecord(EntourageID) function and passing the EntourageID to the function.

Note that this function closes the currently open record without saving any changes. It is up to you to properly save the record using PCEM_SaveRecord before beginning another command. Properly saving records is discussed later in this document.

Indirectly:

The functions PCEM_GetFirstRecord and PCEM_GetNextRecord offer the user the ability to iterate through the records contained in the currently open folder. For example:

```
/* Opens the first Record in the Current Folder */
SetField( someField ; PCEM_GetFirstRecord )
Loop
Exit Loop If[ someField = 'End' or someField < 0]
/* Access - Modify the fields */
...
/* Opens the next record */
New Record/Request
SetField( someField ; PCEM_GetNextRecord )
End Loop
...
```

Note that these functions make either the First or Next record the currently open record available. They also both close the currently open record without saving any changes. It is up to you to properly save the record using PCEM_SaveRecord before beginning another command. Properly saving records is discussed later in this document.

5) Manipulate the Fields

Once a record is created or opened then you can access the fields contained within that record. You can either set or retrieve the contents of the available Entourage fields for that record using PCEM_SetFieldData or PCEM_GetFieldData. The PCEM_SetField(FieldName ; FieldValue) function is used to populate fields in the currently open Entourage record. The PCEM_GetFieldData(FieldName) function is used to extract data from the currently open Entourage record.

For example, we will perform a basic push from FileMaker to Entourage and add a new contact setting the first name, last name and email fields.

```
PCEM_NewRecord( "Address Book" )
PCEM_SetFieldData( "First Name" : "Joe" )
PCEM_SetFieldData( "Last Name" : "Smith" )
PCEM_SetFieldData( "E-mail" : "joe@someisp.com" )
PCEM_SaveRecord
```

For a complete list of all available Entourage fields please reference the "Functions Guide".

6) Save a Record / Send Email

After manipulating the field data then use the PCEM_SaveRecord function to save the record in Entourage.

If the current record is a new mail record, then a call to SaveRecord will cause Entourage to send the message. You can also send email in a single step using the PCEM_SendMail function. This is known as the "short" method. The "short" method is easier to program and supports HTML email via a parameter setting. The only time you need to send an email using the "long" method (PCEM_NewRecord, PCEM_SetFieldData, PCEM_SaveRecord) is if you want to set the category field in your email. Please refer to the Functions Guide for more information on how to properly use the PCEM_SendMail and PCEM_SaveRecord functions.

7) Move and Delete a Record

In some instances it may be desired to move or delete a record in Entourage.

Move a Record:

After opening a record call the PCEM_MoveRecord(FolderPath) function to move the record from the current folder to another folder. The following caveats must be recognized:

- The FolderPath must contain the full path from the root folder (e.g. 'Inbox/somesubfolder/...')
- After a MoveRecord request the folder identified by the FolderPath becomes the currently opened folder. If the user is going to move multiple items a call to OpenFolder must be called to return to the previously opened folder.

Delete a Record:

In order to delete records you can use the following functions PCEM_DeleteRecord(EntourageID ; Permanent) or PCEM_DeleteAllRecords(ExcludePrivate ; ExcludeDistList). The DeleteRecord command will delete the currently opened record identified by the EntourageID. By using the optional Permanent parameter a mail record can be permanently deleted or sent to the "Deleted Items" folder in Entourage for archiving.

The PCEM_DeleteAllRecords command will delete all records from a given module. These delete functions should be used with extreme caution as ALL items are deleted. The DeleteAllRecords function will not save a copy of the mail items in the "Deleted Items" folder in Entourage. Please see Functions Guide for a detailed description of these functions.

III. Tips

- ❖ The plug-in currently is only fully compatible with POP accounts or any data residing in the “Folders on My Computer” area within Entourage. As the plug-in matures, then full Exchange and IMAP compatibility will be available.
- ❖ This Developers Guide is designed to give you a basic understanding of how Entourage and FileMaker “talk” to each other. There are various other functions available by the plug-in depending on your needs. Please reference the Functions Guide for a detailed list of all available functions.
- ❖ GUID is a unique identifier created by Entourage. This ID is unique across all folders (Address Book, Calendar, Tasks, Notes) and is unique to every Entourage user. In other words you can store the GUID to identify records in a multi-user environment. This may make programming easier if you are creating a data merge/sync process in a multi-user environment.
- ❖ The plug-in cannot edit or maintain the list of categories. This is done exclusively in Entourage. If you were to add a brand new category in Entourage and expect a record to be assigned to that new category from FileMaker, you must force the call of “Authenticate” in the plug-in before a record can be assigned to a brand new category created in Entourage.

IV. Contact us

Successful integration of a FileMaker plug-in requires the creation of integration scripts within your FileMaker solution. A working knowledge of FileMaker Pro, especially in the areas of scripting and calculations is necessary. If you need additional support for scripting, customization or setup (excluding registration) after reviewing the videos, documentation, FileMaker demo and sample scripts, then please contact us via the avenues listed below.

Phone: 760-510-1200

Email: support@productivecomputing.com

Forum: www.productivecomputing.com/forum

Please note assisting you with implementing this plug-in (excluding registration) is billable at our standard hourly rate. We bill on a time and materials basis billing only for the time in minutes it takes to assist you. We will be happy to create your integration scripts for you and can provide you with a free estimate if you fill out a Request For Quote (RFQ) at www.productivecomputing.com/rfq . We are ready to assist and look forward to hearing from you!