



# Developer's Guide

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## **I. Introduction**

### **Description**

The eSign Signature Capture plug-in from Productive Computing offers functions that support capturing and rendering ESIGN / UETA compliant digital signatures. The current version of the plug-in is intended to be used with Topaz® 1x5 signature pads and Tablet PCs. With this plug-in the FileMaker® user can capture and store legally binding signatures in their FileMaker solution. These operations are accomplished by using FileMaker function calls from within FileMaker calculations. These calculations are generally determined from within FileMaker 'SetField' or 'If' script steps.

### **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

### **Technical Note**

Congress enacted the Electronic Signatures in Global and National Commerce Act (ESIGN Act) in June of 2000. The National Conference of Commissioners on Uniform State Laws (NCCUSL) adopted the Uniform Electronic Transactions Act (UETA) in 1999. Both Acts provide a legal framework for electronic transactions. Either Act gives electronic signatures and records the same validity and enforceability as manual signatures and paper-based transactions.

Before implementing electronic signatures and transactions in your organization consult an attorney to assure compliance with any applicable laws regarding electronic signatures and electronic transactions.

## II. Integration Steps

Accessing and using the plug-in functions involve 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 Windows the plug-in will have a ".fmx" extension.
- 3) Copy the actual plug-in and paste it to the Extensions folder which is inside the FileMaker program folder. On Windows this is normally located here: C:\Program Files\FileMaker\FileMaker X\Extensions.
  - For use with LCD Topaz devices please install the "PCES\_LCD8SigCapt.fmx" plug-in.
  - For use with non-LCD Topaz devices please install the "PCES\_8SigCapt.fmx" plug-in.
  - For use with Tablet PCs please install the "PCES\_TabletSigCapt.fmx" plug-in.
- 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 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 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-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 Windows this certificate is in the form of a "pci" 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 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 GetOperatingMode and Version which can assist you when developing an installation and registration process in your FileMaker solution.

## 2) Installing the Topaz Software or Tablet PC License

### Install Topaz Software and Device:

The software included with the Topaz device must be installed for both rendering and capturing signatures. To render signatures it is not necessary to install the hardware but the software must still be installed. The Topaz device need not be connected to the machine to render signatures. In order to capture signatures you will need to install the actual Topaz device. Please refer to the documentation that came with the device to install the software and properly connect the hardware.

#### Which Topaz Device Is Right For You?

- Topaz T-S460-HSB (non-LCD device) requires the user to click an "OK" button on the computer to finish the scan process.
- Topaz T-L462-HSB (LCD device) provides the signor with 'Cancel' and 'OK' buttons on the device itself and does not require interaction by the FileMaker user on the computer.
- Topaz T-LBK462-HSB (Backlit LCD device) provides the signor with 'Cancel' and 'OK' buttons on the device itself and does not require interaction by the FileMaker user on the computer.

### Install Tablet PC License:

When using the plug-in with a Tablet PC, you must install the necessary license. This license is included with our original download. To install this Tablet PC license please select the "sigplus374tpc.exe" and run this application. This must be installed on each Tablet PC using the plug-in.

## 3) Determine Compliance with Local Laws

The eSign Signature Capture plug-in and accompanying Topaz or Tablet PC software meet federal requirements for capturing and rendering legally binding signatures. This means that when used properly the software will produce an electronic signature that meets the criteria for legally binding electronic signatures. The plug-in offers the FileMaker developer the tools to capture legally binding electronic signatures. The plug-in is not intended to be a 'total solution' for a paperless office, but rather to offer some of the tools required to create one. It is the responsibility of the developer to ensure that their electronic document storage solution will meet local requirements regarding electronic signatures, transactions, and documents.

Since the laws regulating electronic signatures, transactions, and documents vary from state to state and country to country, we recommend consulting an attorney regarding the laws in your locality. For instance, one state might allow for signatures on mortgage documents to be in electronic format and another state might require hand written 'wet ink' signatures on documents for the same purpose. Also, the data required to be stored with an electronic signatures differs from state to state. For instance, one state might require that the current date be encrypted with an electronic signature and another state may require the date to be kept separate from the signature entirely.

## 4) Capturing and Rendering Signatures

Now we are ready to start using the plug-in to capture and render signatures.

### **Option 1: Capture Signature and Bind Signature to Data:**

This is the recommended usage choice for capturing signatures as signatures are securely bound to specific data. With the plug-in installed, scan the signature and produce the image of the signature using a calculation field that calls the plug-in. This is how our demo works today. If the user changes the bound text, the signature will disappear because the original bound text is no longer validated against the original signature data. The calculation field in FileMaker is continuously checking between the bound text and the signature data using the plug-in. If either the bound data changes or the plug-in is not installed, then the signature will not render. Every user who wishes to "see" the signature must have the plug-in installed.

The one function used to capture the signature is `PCES_CaptureSignature( BoundData )`.

When `PCES_CaptureSignature` is called, a signature dialog is presented to the user and the signature pad is ready to capture a signature. The signature will be bound to the 'BoundData' parameter passed to the function. If the 'BoundData' is ever changed after the signature is captured or if the signature data itself is ever modified, then the signature will be rendered invalid. In addition the rendering function will not return a proper image of the signature.

The `PCES_CaptureSignature` function returns an ASCII string of characters that represent a signature. The text of the document record is passed to the capturing function. The returned string will be bound to this text. This technology allows devices to capture signature information that is unique to the person signing. This information is used by analysts to determine ownership of the signature. This signature may be bound to data you have stored in your database. If the data ever changes or if the signature is tampered with, the signature is rendered invalid. Binding captured signatures to data in your FileMaker Pro database has many benefits such as authenticating content, securing unauthorized changes to documents or forms by invalidating signatures, increasing accountability and ensuring non-repudiation of transactions.

### **Render Signature:**

The one function used to render the signature for display or printing purposes is `PCES_RenderSigFromString ( SigString ; BoundData )`. The function is passed with the signature string. This is the string returned by the capturing function and the data that is bound to that signature. If either the signature or the data bound to that signature has been modified, the literal 'UNSIGNED' string will be returned. Otherwise a bitmap of the signature will be returned and can be displayed or printed.

## **Option 2: Capture Signature without Binding Signature to Data:**

This option does not require the plug-in to see the signature after the first initial capture, but is also is less secure and does not bind the signature to data. You can enable multiple signatures on a document or capture a signature and store the signature in a container field.

Using a machine that has the plug-in installed, scan the signature and render the signature with a traditional calculation field that calls the plug-in. Again this is how our demo works today. Then by incorporating an additional script step (set field), you can copy the signature image from the calculation field to a regular FileMaker container field. This permanently stores the "image" of the signature without the need for the plug-in. HOWEVER, using this method does not properly bind the signature to data. In other words, if a user comes along and changes the bound text in the record, the signature will remain visible as if the record was perfectly valid when in fact it may not be.

Some users just want to capture a scanned signature for use on non-secure, non binding documents. For this use option 2 is perfectly fine. This option does not require the plug-in for users to see a signature because the signature is permanently stored in the container field. However the plug-in is required to make the original signature capture. This option is a simple way to have a user scan and capture a signature. This option does not actively and continuously bind and check text data against signature data.

### III. 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](mailto:support@productivecomputing.com)

Forum: [www.productivecomputing.com/forum](http://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](http://www.productivecomputing.com/rfq) . We are ready to assist and look forward to hearing from you!