

Integrating Visual FoxPro and MailChimp

Whil Hentzen

We've all written our own email applications. I finally decided to use an outside service to handle my emailing needs. Here's how I used VFP to integrate with the mailing service.

I had a customer database with orders and mailing history going back over 20 years. Some of it was current, from someone buying an ebook a month or two ago; some was very, very old, someone attended Great Lakes Great Database Workshop in 1994 and then I never heard from them again.

So I didn't want to convert my entire customer list – after a certain number of 'freebies', you pay for every address in your list, and why pay for uninterested folks? Yet I didn't want to lose anyone; I regularly received emails from folks who said, "I love hearing from you guys, keep me on your list!"

I evaluated several mailing services, and chose MailChimp based on my requirements.

The Mail Chimp Double-Opt-In

In order to avoid emailing people who aren't interested in that email, MC requires (and I agreed with) the double-opt-in process. You've run into this yourself, where you sign up for something, and then get an email asking you to confirm your interest. The long version is here:

<http://kb.mailchimp.com/article/how-does-confirmed-optin-or-double-optin-work>

Here's the brief version, together with the salient points of interest, and some explanation of things that MC wasn't very clear about. In other words, things you have to do.

(By the way, some of these screen shots may be a little small to read all the detail; I've included larger versions of them in this articles Downloads so you can blow them up and see everything more clearly.)

1. You create a sign-up form on the MC website, as shown in **Figure 1**. This sign-up form becomes a landing page at MailChimp.com where your customer will enter their email address and additional information as you choose. (Finding

this mechanism is not easy to do on the MC site – you go into your list, then open the 'Stats' combo on the right side.)

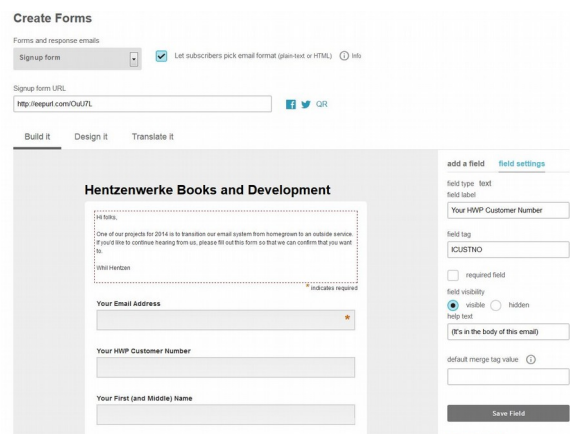


Figure 1. A typical MC signup form.

2. When you create a sign-up form, MC generates a URL that you will use to point your subscribers to opt in. (Note: At first I thought this URL was a one-time use type of thing, but it turns out that it's a permanent link to that form.) You can include this URL in emails you send, or on your website. See **Figure 2**.

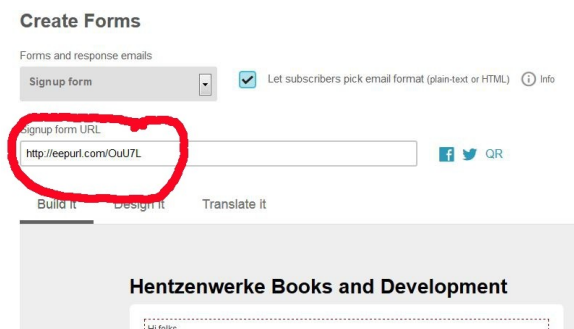


Figure 2. The URL you'll add to your own email.

3. Then, outside of MC, you send out an email to your customer list, asking them to opt-in to your 'new' mailing list. See **Figure 3**.

Hi folks,

I've started a new series, "How to Upgrade Your FoxPro 1.x/2.x Application to Visual FoxPro". You can read more about it on our website at www.hentzenwerke.com, and follow the articles as they are published at www.foxrockx.com.

Second, we're moving our mailing to an outside service. If you'd like to continue getting email from us, please opt-in using this link:
<http://eepurl.com/OuU7L>

If you include your Hentzenwerke Publishing customer number:
 160384

it'll enable us to tie your order history to your email address.

Thanks!

Whil Hentzen
 Hentzenwerke Publishing

Figure 3. Email sent to existing customer list.

4. They click on the URL in the email, and get to the sign-up form on the MC site. See Figure 4.

Figure 4. The sign-up form on the MailChimp website.

5. They fill in their data and then click on the 'Subscribe to list!' button on the sign-up form.

6. They get a web page telling them that they'll get an email that they'll need to respond to in order to confirm. See Figure 5.

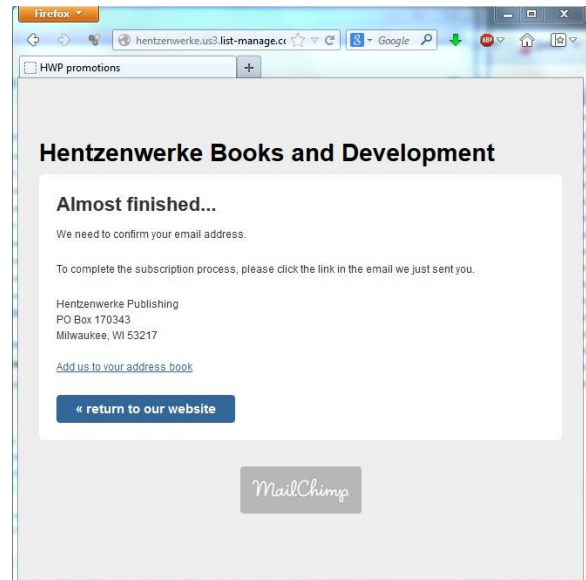


Figure 5. Web page requesting second step of opt-in.

8. They get a follow-up email saying "We've received a request to add you to the mailing list. Please respond to this email to confirm that this is, indeed, you." See Figure 6.

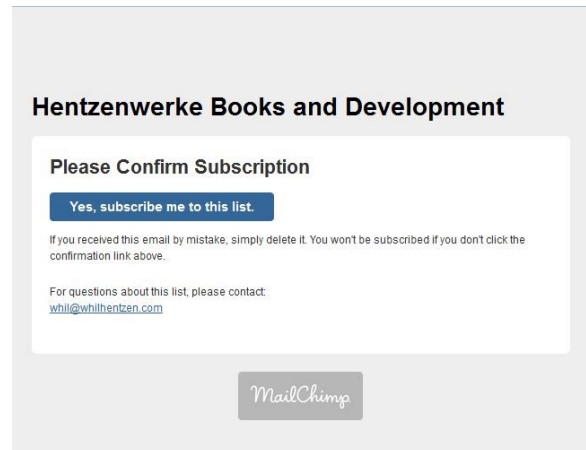


Figure 6. Email (HTML) requesting confirmation.

9. They click on the "Yes, subscribe me" button.

10. They get redirected to one more Web page saying, "Thanks, you've been subscribed!" See Figure 7.

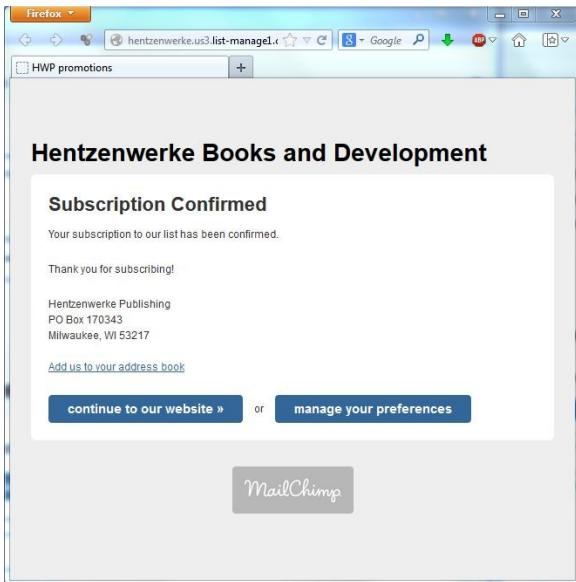


Figure 7. Final “Thanks!” web page.

Managing your preferences

You'll notice the “Manager your preferences” button on the right side of the web page image in Figure 7. Your subscribers can use this to update the information they've entered into the sign-up form (Figure 4.) However, that button is available on a Web page that was flashed at them at the end of this process. How will they get to it later? It isn't easily accessible

So how does a customer change their data?

The answer isn't super obvious, but kinda makes sense once you find out. All a subscriber has to do is go to the original subscribe URL (in this case, found in Figure 2), and then enter the email address they subscribed with. (Naturally, if they enter a different email address, they'll start the subscription process from the start.)

Once they do, they'll be greeted with an error message – and, in small print, a link to manage their preferences, in the second pink box, as shown in Figure 8.

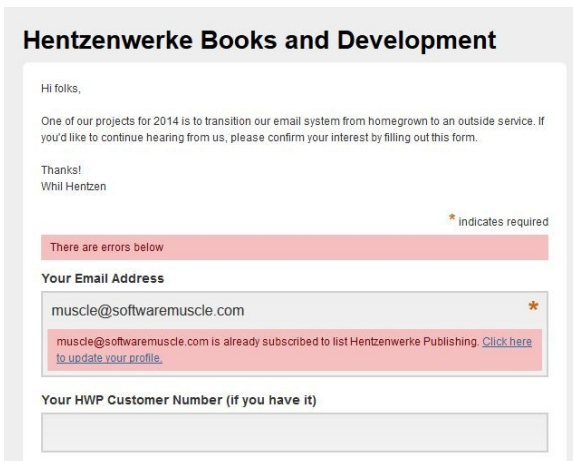


Figure 8. Managing your preferences after subscribing.

Clicking the link will bring up a data editing window like they used in Figure 4.

Personally, I think they could make this a bit more obvious, I think most people will see the bright pink messages and close the window. So you'll have to explicitly warn your subscribers to look for the link.

Behind the scenes

So that's the process. What happens behind the scenes?

First, we're going to suppose that you've got a VFP table with your customer table that you've used to send emails. You've used that table to email someone and ask them to subscribe to your new MailChimp list. We're further going to suppose that they've responded affirmatively, entered their email address (and other info) into the sign-up form that you set up, and now their info is in a table on the MailChimp site.

At this point, you can do several things with your MailChimp list. You can look at it, of course. (Everybody goes “ooooo!!!!”)

And naturally, MC gives you the ability to send emails to your new MC list (these are called campaigns.)

Updating Your Customer Database with MailChimp Subscriptions

So you've sent out your email to your current customer database, and they are subscribing with wild abandon. Naturally, due to a variety of factors, not everyone in your database will subscribe immediately.

- Didn't see your initial emailing
- Put it aside to do later
- Not interested

So it behooves you to email your customer database. You'll want to email those who haven't opted in once or twice more. Or maybe a hundred times, depending on how persistent you are. However, you don't want to keep emailing those in your customer database if they have already subscribed through MailChimp. So you'll want to update your customer database with subscription data from your MailChimp database. There are a couple of ways to do this. Since we're new at this, we'll do it the easy way first, and in our next article, we'll get more sophisticated.

This baby-steps method involves you downloading your MC table and then run an update routine that flags your VFP table from your MC table.

Downloading your MailChimp Data

First, download your MC table via the Export function on the List page as shown in **Figure 9**.

1. Log on to MC
2. Click on lists icon on left side (at this writing, the third icon from the top, the two pages, one on overlaid on the other). In Figure 9, it's circled in blue.
3. Click on list name
4. Click on Export in upper right corner (circled in red.)

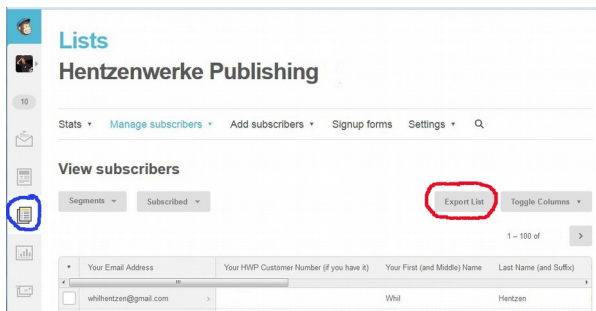


Figure 9. The Lists icon, then exporting a selected list.

You'll get a message saying that your export is underway, and that you'll get an email once it's done. This is a little misleading, because it sounds like you'll have your list once "it's done". That's not really true, what's happening is that the list is being prepared, once "done", you'll still have to actually download it to your machine. In other words, they're parsing your data from everything else on their computers.

Collecting your MailChimp Data

Once the 'download' is 'done', you'll get an email that reads something like this:

```
Your list export has been completed.
-----
The export is for your "Hentzenwerke
Publishing" account.
This was exported by Whil Hentzen. (IP:
10.0.0.1 - Stuttgart, Germany)
-----
The data export for Hentzenwerke Publishing
has been successfully exported.
-----
Download the list data:
https://us3.admin.mailchimp.com/lists/members/
download-export?id=verysecretid
-----
```

Click on the link and a ZIP file that contains a CSV file will land in your Downloads folder.

The CSV file includes all of the fields you've defined for your list as well as the opt-in parameters.

A typical CSV format is shown in **Table 1**.

Table 1: CSV Format

Field Name	Sample Value
"Your Email Address"	muscle@softwaremuscle.

	com
"Your HWP Customer Number"	160384
"Your First (and Middle) Name"	Software
"Last Name (and Suffix)"	Muscle
"What topics are you interested in?"	Visual FoxPro, Python, Software Development
EMAIL_TYPE	html
MEMBER_RATING	2
OPTIN_TIME	03/24/14 08:38 PM
OPTIN_IP	12.237.211.178
CONFIRM_TIME	03/24/14 08:48 PM
CONFIRM_IP	12.237.211.178
LATITUDE	43.93
LONGITUDE	-87.99
GMTOFF	-6
DSTOFF	-5
TIMEZONE	America/Menominee
CC	US
REGION	WI
LAST_CHANGED	03/24/14 09:41 PM
LEID	167741153
EUID	61ef0e7af7

We'll use the OPTIN_TIME and LAST_CHANGED values to update your own table. Note, however, that there is not a field or value for when a list subscriber unsubscribes. Instead, that row is deleted from the list. Thus, we'll have to do a reverse look up to flag those who have unsubscribed.

Updating your VFP Table from MailChimp

What to do next? I have a folder named 'data' where all my company data is stored; I added a new folder underneath called "MailChimp", where I store each export as I need it. Unzip it and throw the zip away.

Next I run a routine that coordinates my customer table with the new MailChimp subscription file. This update has to go both ways, of course, because you have to be able to handle unsubscribes as well.

So, first, create fields in your customer table for MailChimp subscription info. I have three:

```
dOptin_d Date of Opt-in
tOptin_t Time of Opt-in
```

cOptin_i IP Address of Opt-in

The routine to parse the CSV first updates the VFP customer table. It tries to match on customer number if available. If not, match on email address. If that's not available either, it's a subscription from someone who wasn't in my customer database before.

In the first two cases, the three new "opt in" fields are updated. I also update my "email status" field, indicating that this record is now managed under MailChimp and that I'll never mail to that address through my old mechanism again.

The second step is to update the customer table to flag those who have unsubscribed from MC. Here's the trick. As mentioned, the exported list in MC does NOT include the unsubscribed data. Once someone unsubscribes, they're simply not included in the export any longer.

Thus, you'll need to go through your customer table, examining all of those MailChimp status records, and look for them in the MailChimp export. If not found, that means that the subscriber has unsubscribed. You'll want to note that in your own customer table as well. At least I did. YMMV.

Getting More Sophisticated

MailChimp provides an API to programmatically work with your data. In the second part to this series, I'll describe how to access your MailChimp from VFP via the API. Stay tuned!

Author Profile

Whil Hentzen is an independent software developer based in Milwaukee, Wisconsin (as opposed to Milwaukee, Minnesota, as many people think.) His writing has killed many trees over the years, but none since 2007. He has realized he really sort of misses it. You can reach him at whil@whilhentzen.com