## John Deubert's Acumen Journal, November 2001

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To print accented and other non-English characters in most PostScript fonts, you need to "reencode" that font, assigning useful character codes to the printed characters. This month and next, we see how to do this, so we can print words like "Yucatán" and "facade."

**Class Schedule** 

**November-December-January** 

Where and when are we teaching our Acrobat and PostScript classes? See here!

What's New?

**New class: Creating Acrobat Forms.** 

Announcing a new, half-day class in how to create Acrobat forms.

**Contacting Acumen** 

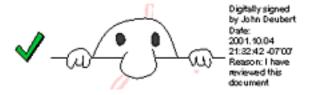
Telephone number, email address, postal address, all the ways of getting to Acumen.

Journal feedback: suggestions for articles, guestions, etc.

## **The Acrobat User**

# **Acrobat Signatures, Part 2**

Last month, we saw how to sign a PDF file using the Adobe Self-Sign Security mechanism that ships with Acrobat. As you recall, there were 4 steps to this process:



- 1. Create a User Profile that identifies you to the Acrobat signature mechanism. This is a one-time process that must preced your signing any Acrobat Files. Among other things, you will select a password for yourself.
- 2. Log into the Self-Sign Security mechanism in Adobe Acrobat. You will need to supply your password.
- 3. Click on the Signature tool in Acrobat and then click and drag out a rectangular area on the document you want to sign.



4. Fill out the resulting dialog box, which includes confirming your password.

That's it; you have now signed the PDF file.

This month, we'll look at what to do with a signed PDF file. In particular, we shall see what is involved in sending a signed PDF document to another person and how that person can confirm the validity of your signature.

### Sending Signed Documents

You have electronically signed a PDF document. Now what?

Well, now you want to send that signed document to someone else, indicating your approval or agreement (or whatever).



Digitally rigned by Wenceshur. Jones Discer Wenceshur. Jones Jones , or Our a-Squimel Corporation, or US Date: 2001.08.01 15:2508-0700\* Respont I have reviewed this document Location. Dane Permit.

The recipient, in turn, needs to confirm that the signature on the page is actually yours. To make this possible, you will need to send a *user certificate* to each recipient of your signed PDF documents.

#### **User Certificates**

Signature IDs

The password you choose when you create a user profile is one of two passwords associated with your profile. The second password is invisibly generated for you by Acrobat when you create your user profile.

The password you chose yourself lets you place signatures on the page. The other, internal password is what actually identifies you to the Self-Sign Signature mechanism. Think of it as your "signature ID."

Your signature ID is embedded in encrypted form in the PDF file as part of your Acrobat signature. To confirm that a signature is really yours, a recipient's copy of Acrobat must be able to compare the signature ID in the signature with a signature ID that is known to be yours.



This is why you send a user certificate to the document's recipient.

#### User Certificates

A user certificate is an FDF file ("Form Data Format") you export from within Acrobat that contains encrypted information about you as a document signer, including your signature ID.

You must send this file to anyone to whom you will send signed PDF files. It allows their copy of Acrobat to verify that the PDF file was actually signed by you.

#### Creating a User Certificate

To create a user certificate, you must first log into the Self-Sign Security system. (See last month's article for detailed instructions on logging in.) Then:

Tools

Comments

Compare

- 1. Select Self-Sign Security>User Settings from the Acrobat Tools menu.
  You will now be looking at the User Settings dialog box (below, right).
- 2. Select *User Information* in the list on the left side of the dialog box. This panel presents signature information about you.
- 3. Click on the *Export to file...* button. You will be asked to name the FDF file. Do so.
- Note signature "fingerprint" information.
   Acrobat presents you a dialog with two long strings of text that constitute a "fingerprint" for this certifi-

cate. You might want to copy these; you can use them later to determine whether your certificate has become corrupted. I never used these, myself.



Export to File.. | E-mail...

Wheezy Documents Profiles: John Deubert apt

Certificate: Details...

Profile File:



Backup...

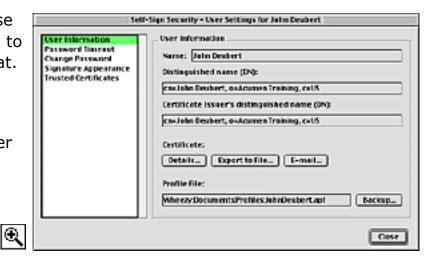
Close

That's it. You have now created a User Certificate you may send to recipients of your signed PDF files.

#### E-mailing Certificates

By the way, you can also create a use certificate and immediately e-mail it to someone directly from within Acrobat.

Simply click on the *E-mail* button in the User Settings dialog box and Acrobat will present you with another dialog box that lets you e-mail the certificate directly.



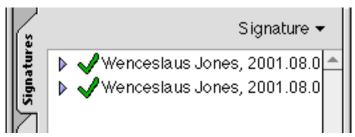
Most of this dialog box is reasonably straightforward and we'll not discuss it here.





# Receiving a Signed PDF File

When you receive a signed PDF document from someone, you will need to verify that the signature was actually placed on the page by that person. In Acrobat, this is referred to as *validating* the signature.



The process is pretty easy: Acrobat can scan through a PDF file and declare valid (or not) all of the signatures in the document.

The question is: how can Acrobat know whether a signature is really yours?

The answer: the recipient must import a user certificate, sent by the signer, into his or her Acrobat. Acrobat can then compare the signature ID in the user certificate with that embedded in the signature.

What's a valid signature?

A signature is valid if its signature ID matches that in your user certificate and the document has not been changed since it was signed.

**Trusted Certificates** A user certificate imported into a recipient's Acrobat is referred to as a *trusted certificate*.

It is "trusted" in the sense that you are convinced the certificate actually came from the signer of the document.

Perhaps you have called that person to confirm he or she actually e-mailed you a certificate on such-and-such a date. Perhaps the signer personally gave you the certificate on a disk.

One way or another, you trust that this certificate truly came from the signer.

#### Importing a Trusted Certificate

To import a trusted certificate:

- 1. Log into the Self-Sign Signature system. (Select *Tools>Self-Sign Signatures>Log in...*
- 2. Select *Tools>Self-Sign Security>User Settings...*

You will be looking at the User Settings dialog box.

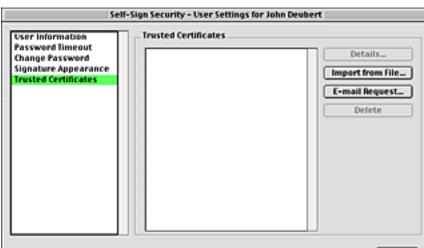
3. Select *Trusted Certificates* from the list on the left.

You are now looking at a list of all the trusted certificates you have imported in the past.

4. Click on the *Import from File* button.

Acrobat will ask you to select the FDF file that contains the signer's user certificate.

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Log In As Different User...

Close

Log Out John Deubert User Settings...

Tools

Comments

**Digital Signatures** 

Self-Sign Security

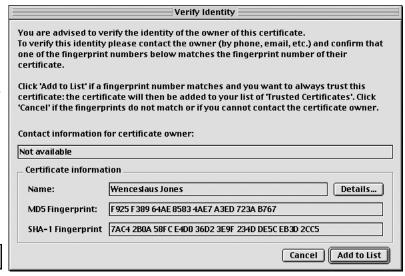
Compare

5. Compare the signature "fingerprints," if you wish.

Acrobat will display signature information associated with the user certificate. You may want to compare notes with the signer to see if these were the same signature information the signer was shown when the user certificate was created.

I confess I never do this step.

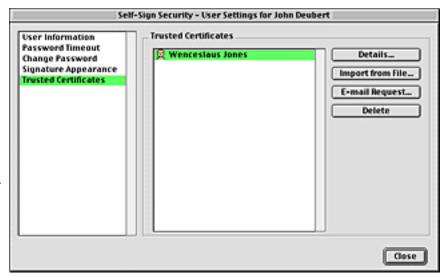




#### We're done!

The name of the signer will now appear in the User Settings dialog box as a trusted certificate.

Acrobat will recognize signatures by this person.





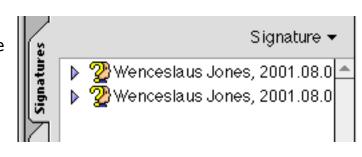
#### **Validating Signatures**

Having imported a trusted certificate, how do we determine whether the signatures in a PDF file are valid? I usually open the *Signatures* panel and work from there.

To validate a signature...

- 1. Log in, as usual.
- 2. Expose the Navigation pane, on the left side of the Acrobat window, and bring the *Signatures* tab to the front.

The Signatures tab presents a list of the signatures in this document, each tagged with a question mark, indicating that it haven't been validated yet.



3. In the drop down menu attached to this pane, select *Verify all signatures.* 

Acrobat will scan through the PDF file comparing each signature in the file with the information in the trusted certificates you have imported. All valid signatures will have the question mark replaced by a

check mark.

You can be very confident that these are the signatures of the proper people.



Wenceslaus Jones, 2001.08.0

'Wenceslaus Jones, 2001.08.0|

Signature •

**Summary** There seem to be a lot of steps associated with using Acrobat Self-Sign Security, but it's all pretty simple. In summary, here's the procedure we have described these past two issues. (You might want to print the next three pages as a cheat sheet.

#### Signing a document

Creating a Profile

- 1. In Acrobat, select Tools>Self-Sign Security>Log in...
- 2. In the resulting dialog box, click on the New User Profile... button.
- 3. In the New User dialog box, select a password for yourself and click OK.

- Signing the document 1. In Acrobat, select Tools>Self-Sign Security>Log in...
  - 2. In the *Log In* dialog box, select your name and type in your password; click *OK*.
  - 3. Click on the *Signature* tool in the toolbar.
  - 4. Click and drag out a rectangular region on the PDF page.
  - 5. In the resulting dialog box, supply your password and fill in whatever other information you want (such as your reason for signing the document).

#### Creating a user certificate 1. In Acrobat, log in.

- 2. Select Tools>Self-Sign Security>User Settings...
- 3. In left-hand side of the resulting dialog box, click on *User Information*.
- 4. In the resulting controls, click on the Export to File... button
- 5. Select a name for the certificate file.
- 6. Click OK in the resulting dialog box that gives you the "fingerprint" information.

- Sending a signed document 1. Create a user certificate, if necessary.
  - 2. Send the signed PDF file and the user certificate file to the recipient of the signed PDF file.

(Note that you only have to send your user certificate once to a given recipient.)

#### Receiving a signed PDF file

#### Importing a trusted certificate

- 1. In Acrobat, log in.
- 2. Select Tools>Self-Sign Security>User Settings...
- 3. In left-hand side of the resulting dialog box, click on *Trusted Certificates*.
- 4. Among the resulting controls, click on the Import from file... button.
- 5. Select the user certificate file sent to you by the document's signer.
- 6. Click *OK* in the resulting dialog box (it's those fingerprint strings again).

#### Validating a signature

- 1. In Acrobat, log in.
- 2. Expose the navigation pane (on the left side of the Acrobat window).
- 3. In the pop-up menu associated with the Signatures pane, select Verify all signatures.
- 4. Examine the result. Verified signatures will be tagged with a check mark.

#### **Final Remarks**

**Acrobat 4** All of the screen shots in our two-month discussion have been of Acrobat 5. The Self-Sign Security mechanism in Acrobat 4 is substantially the same. Dialog boxes look different, but otherwise it is very much the same mechanism.

#### **Signature Plug-ins**

What I've described here is the signature mechanism that ships with Adobe Acrobat. The signature mechanism, however, is built around a plug-in programmers' interface. Third party companies can and do create Acrobat plug-ins to implement other electronic signature methods specific to a particular company or need. Check out Planet PDF or PDF Zone for information on these.

#### Reverting to signed versions

If any of the signatures in a PDF file fail to validate because the document has changed since the signing, you can tell Acrobat to revert the document to the state it had when it was signed. We don't have space to talk about it here, but experiment by selecting View Signed Version in the pop-up menu of the Signatures pane.

#### Try it!

If you want to practice validating signatures, look among the Acrobat sample files on the Acumen Training web site. You will find a .sit/.zip file containing a signed PDF document and a user certificate file for the signature.

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## **PostScript Tech**

# Reencoding Fonts, Part 1

Here's a common question from the newsgroups: how do you print accented and other non-ASCII characters in a PostScript font? An examination of the Adobe Standard Character Set (Appendix E in the PostScript Language Reference Manual) shows that most fonts contain a very large number of characters that are not immediately accessible; in particular, all the characters with accents and other diacritical marks simply cannot be conveniently accessed in a font as it ships from the foundry.

So how do we print these characters?

Actually, the process is very easy, though not obvious. We need to assign character codes to these characters within the font, a technique known as "re-encoding the font." Once we have done this, *show* can print these characters within a string, as usual.

Doing this requires a small bit of code, but one you will probably need to apply to every font you use in industrial-strength PostScript code.

We're going to look at this in two parts.

This month, we'll look at a PostScript program that reencodes a font, inserting four characters into Helvetica. This program is easily understood, but its technique is not useful for driver output, that needs to assign codes to many characters within a font.

Next month, we'll look at PostScript code more appropriate for generalized output, such as that generated by a PostScript driver.

## **Background**

#### **Character Sets**

Appendix E in the PostScript Language Reference Manual (PLRM) presents the sets of characters built into Adobe's fonts; these sets have become standard for pretty much all font vendors. Of particular interest to our discussion is Table 5 in this appendix, the *Adobe Standard Latin Character Set*. (This is on page 779 of the PLRM.)

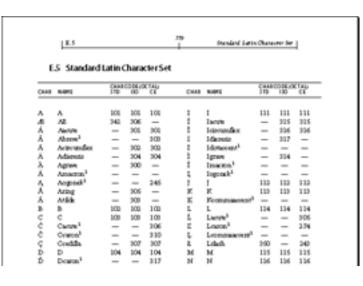
This table lists all of the characters in Adobe's alphabetic fonts intended for the Western market. For each character, the table lists five columns of information:

Character shape - a picture of the character

Character name - the character's name.

Character code - the character code assigned to the character in each of three character encoding schemes. We care about STD, Adobe's Standard Encoding.

Next Page ->



#### E.5 Standard Latin Character Set

CHAR	NAME	CHAR CODE (OCTAL) STD ISO CE				
Α	A	101	101	101		
Æ	AE	341	306	_		
Á	Aacute	_	301	301		
Ā	Abreve <sup>1</sup>	_	_	303		
Ā	Adraımflex	_	3 02	302		

# PostScript Encoding Arrays

As you recall from your PostScript classes, within a PostScript font, the correspondence between character codes and printed characters is specified by an array named *Encoding* inside the font dictionary. This is a 256-element array of character names.

Every character within a PostScript font has a name associated with it. The position of that name within the *Encoding* array determines the character code for that character.

The PostScript *show* operator takes each charac- (\_ \_ \_ \_ \_ \_ \_)**show** ter code in its string argument and uses it as an index into *Encoding*, getting the name of the character it should print.

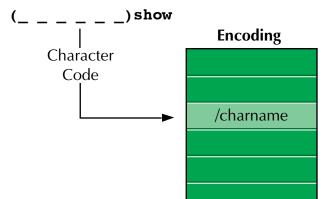
Character

Code

Code

E.5 Standard Latin Character Set

CHAR	NAME	CHAR STD	CODE (O ISO	CTAL) Œ
Α	A	101	101	101
Æ	AE	341	306	_
Á	Aaoute	_	301	301
Ā	Abreve <sup>1</sup>	_	_	303
Ā	Adraımflex	_	3 02	302



#### **Reencoding Fonts**

**Unencoded Characters** 

Examine the fragment of the Latin Character Set table reproduced at right. Several of the characters have no character codes listed in the STD encoding. These characters are unencoded; their shapes are defined in the font, but their names do not appear in the default Encoding array.

To gain access to the unencoded characters (and these include all of the accented characters), we must *reencode* the font. That is, we must insert the names of these characters into the current font's Encoding array.

E.5 Standard Latin Character Set

CHAR	NAME	CHAR STD	CODE (O ISO	CTAL) Œ	
Α	A	101	101	101	
Æ	ΑE	341	306	_	
Á	Aaoute	_	301	301	
Ā	Abreve <sup>1</sup>	_	_	303	
Ā	Adiraumflex	_	3 02	302	
Ä	Adieresis	_	304	304	
À	Agrave	_	300	_	
Ā	Amacron 1	_	_	_	

Typically, we would insert the characters into positions consistent with the computer environment that is generating the PostScript code. That is, PostScript generated on the Macintosh would want to put the name *Aacute* into position *231* of the Encoding array, since that's the character code assigned to Á in that OS; in Windows, we'd place *Aacute* into position *193*, matching that environment's encoding.

## **Example**

This month, we shall look at a program ¿Dónde está el camino a San José? that creates a reencoded version of

Helvetica, inserting four characters into that font's Encoding array. We'll then use the reencoded Helvetica to print a Spanish phrase.

If you have taken any of the Acumen Training PostScript classes, you will recognize this program.

#### Overview

PostScript fonts dictionaries are read-only; you can't change them. This being the case, whenever we do want to change a font, we have to make an entirely new font, identical to the original, save for the changes.

There are four steps to this process:

- 1. Make a new dictionary, the same size as the original font, plus any room needed for our changes.
- 2. Copy everything from our original font into our new dictionary. In PostScript LanguageLevel 1, we should *not* copy the *FID* entry in the font. LanguageLevels 2 and 3 don't care, so we'll not worry about this detail in our example.
- 3. Make the changes to our new dictionary.
- 4. Turn the new dictionary into a font dictionary by calling define font.

```
The Code /Helvetica findfont dup % Find the Helvetica font
                                       % Create a new dictionary the same size
          length dict
          copy begin
                                        % Copy Helv. into the new dict & move the
                                             new dict. to the dict stack.
          /Encoding Encoding 256 array copy def % Make a writable copy of Encoding
          Encoding 1 /oacute put
                                  % Put new character names into Encoding
          Encoding 2 /aacute put
          Encoding 3 /eacute put
          Encoding 4 /questiondown put
          /Helvetica-Esp currentdict definefont pop % Turn current dict into a
                                                     a new font
                                        % Remove the dict from the dict stack
          end
          /Helvetica-Esp 18 selectfont
          72 600 moveto
          (\004D\001nde\ est\002\ el\ camino\ a\ San\ Jos\003?) show
          showpage
```

#### The Code, Step-by-Step

Create a new dictionary

/Helvetica findfont dup % => <<Helv>> <<Helv>>

Here we fetch the Helvetica font dictionary and leave it on the operand stack. We duplicate the resulting dictionary object, since we want to do two things with it: find its length and then copy its contents to a new dictionary.

length dict % => <<Helv>> <<dict>>

We hand one of our copies of Helvetica to the *length* operator, which returns the number of key-value pairs in that font dictionary. We then create a dictionary with room for that many key-value pairs. This leaves us with Helvetica and our new dictionary on the stack.

copy begin

Finally, we copy the contents of Helvetica into our new dictionary. The *copy* operator leaves our new dictionary on the operand stack; we move it to the top of the dictionary stack with *begin*.

At this point, our new dictionary is the current dictionary: the *def* operator will place its key-value pairs into this dictionary.

### Create a new Encoding

array /Encoding Encoding 256 array copy def

The Encoding array in our new dictionary was copied from Helvetica and is, therefore, read-only; we need to create a writable version of it. This line of PostScript creates a 256-element array, copies the contents of Helvetica's *Encoding* (taken from the current dictionary, *i.e.*, Helvetica) into it, and then *defs* it back into our new dictionary with the name *Encoding*.

```
Encoding 1 /oacute put % Put new character names into Encoding Encoding 2 /aacute put Encoding 3 /eacute put Encoding 4 /questiondown put
```

Now we use the *put* operator to place four character names into our new, writable Encoding array. Properly speaking, we don't have to have to insert *questiondown* into Encoding, since it already resides in Adobe's default Encoding. Still, in real life, you'd need to do this, since the default character code for this character doesn't match anyone else's encoding scheme.

In our font, character codes 1 through 4 will correspond to ó, á, é, and ¿.

# Turn the dictionary into a font dictionary

/Helvetica-Esp currentdict definefont pop

Finally, we turn the dictionary into a font dictionary with the *definefont* operator. This operator takes a name and a dictionary from the operand stack; it turns the dictionary into a font dictionary with the specified name and returns a copy of the new font dictionary on the operand stack.

In our case, we immediately discard the copy of the new font dictionary.

end

We tidy up by removing our new dictionary (now a font dictionary) from the dictionary stack.

Use the new font

/Helvetica-Esp 18 selectfont

72 600 moveto  $(\004D\001nde\ est\002\ el\ camino\ a\ San\ Jos\003?)$  show

We can now use the reencoded font just ¿Dónde está el camino a San José? like any other. We make it the current

font with a call to selectfont, do a moveto and a show, printing a phrase in Spanish.

Note that within a PostScript string, a backslash followed by three octal digits inserts that character code into the string.

# Limitations to this example

This example inserts four characters, one at a time, into Helvetica's Encoding array. This is fine if you want to make only a very minor change to the font's encoding, but is not appropriate for the PostScript generated by a printer driver.

A driver needs to place a large number of characters into the font's Encoding array, matching the environment's character encoding. Doing this with a series of *put* operations is tedious, slow, and clunky. Particularly when you recall that a driver needs to reencode *every* font it uses. Every *findfont* must be followed by a reencoding.

#### **Next month?**

Next month, we'll see how to do efficient reencoding in a driver. We shall define a *Reencode* procedure that may be called every time a driver calls *findfont*.

I'm hoping the anticipation will help get you through November.

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## **PostScript Class Schedule**

# Schedule of Classes, Nov 2001 - Jan 2002

Following are the dates and locations of Acumen Training's PostScript and Acrobat classes. Clicking on a class name below will take you to the description of that class on the Acumen training website. (September has been completely consumed by on-site classes, so there are no Orange County classes this month.)

The PostScript classes are taught in Orange County, California.

### **PostScript Classes**

**PostScript Foundations** December 10 - 14

**Advanced PostScript** January 21 – 25

**PostScript for Support** 

**Engineers** January 14 – 18

**Jaws Development** November 27 - 30

For more classes, go to www.acumentraining.com/schedule.html

**PostScript Course Fees** PostScript classes cost \$2,000 per student.

These classes may also be taught on your organization's site.

Registration  $\rightarrow$ 

<u>Acrobat Classes</u> →

## **Acrobat Class Schedule**

# **Acrobat Class Schedule**

#### **On-Site Only**

These classes are taught only on corporate sites. If you have an interest in any of these classes for your group, please see the Acumen Training website regarding arranging an on-site class.

**Acrobat Essentials** This class teaches the student how to make perfect PDF files. It includes complete coverage of the meaning and proper settings of all of the Distiller Job Options.

**Interactive Acrobat** Here we show you how to add bookmarks, links, buttons, sounds, movies, form fields, and other interactive features to an Acrobat file.

#### **Creating Acrobat Forms**

This class shows you how to make interactive forms in Adobe Acrobat. It steps you through creating the form, posting form contents to a server, and everything else you need to create a working PDF form.

### **Troubleshooting with Enfocus' PitStop**

This class shows the student how to use all of the capabilities of this popular editing and preflight software.

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## **Contacting Acumen Training**

# **Contacting John Deubert at Acumen Training**

For more information

For class descriptions, on-site arrangements or any other information about Acumen's classes:

Web site: <a href="http://www.acumentraining.com">http://www.acumentraining.com</a> email: <a href="john@acumentraining.com">john@acumentraining.com</a>

telephone: 949-248-1241

mail: 25142 Danalaurel, Dana Point, CA 92629

**Registering for Classes** 

To register for an Acumen Training class, contact us any of the following ways:

Register On-line: <a href="http://www.acumentraining.com/registration.html">http://www.acumentraining.com/registration.html</a>

email: registration@acumentraining.com

telephone: 949-248-1241

mail: 25142 Danalaurel, Dana Point, CA 92629

**Back issues** 

Back issues of the Acumen Journal are available at the Acumen Training website:

www.acumenjournal.com/AcumenJournal.html

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# What's New at Acumen Training?

### New Class: Creating Acrobat Forms

Acumen Training is now offering a class on Creating Acrobat Forms. This class for beginning to intermediate Acrobat users shows the student how to create interactive forms in Adobe Acrobat. Building real forms as we go, the class teaches the student:

- How to create buttons, text fields, pop-up menus, and all the other data-gathering fields available in Acrobat.
- How to embed interactive features in your forms, such as movies, sounds, and links to the World Wide Web.
- How to use the Acrobat Signature mechanism so that people who fill out your form may place an electronic signature on the PDF page.
- How to submit form data to an external server, there to be inserted in a database, etc.

Creating Acrobat Forms is a half-day class and, like all Acumen Training's Acrobat classes, is taught on corporate sites only.

For more information, see the <u>course description</u> on the Acumen Training web site.

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# **Journal Feedback**

If you have any comments regarding the *Acumen Journal*, please let me know. In particular, we are looking for three types of information:

**Comments on usefulness.** Does the Journal provide you with worthwhile information? Was it well written and understandable? Did you like it, hate it, or did it make you want to eat brussels sprouts? How could we make it better? Do you like the PDF format?

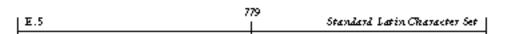
**Suggestions for articles.** Each Journal issue contains one article each on PostScript and Acrobat. What topics would you like us to address?

**Questions and Answers.** We are planning a Q&A section for future issues. Do you have any questions about Acrobat, PDF or PostScript?

Please send any comments, questions, or problems to:

journal@acumentraining.com

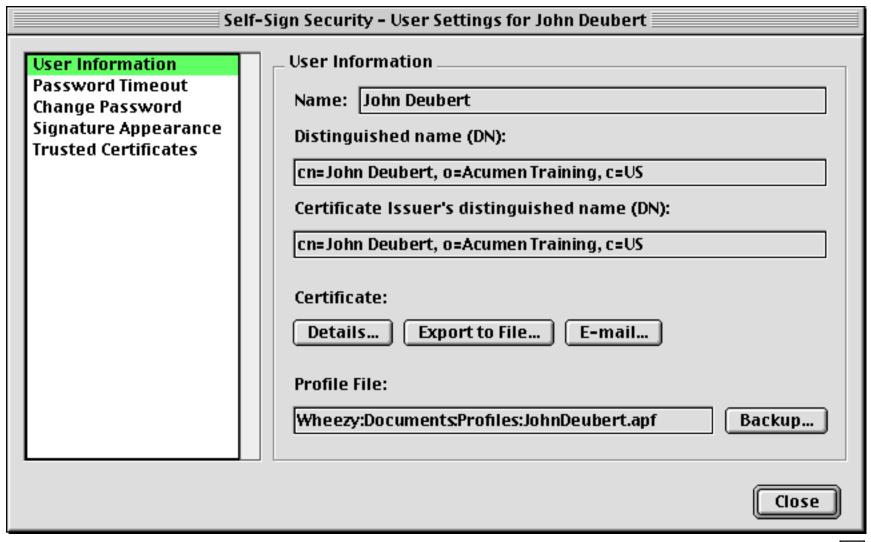
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### E.5 Standard Latin Character Set

CHAR	NAME	CHARCO DE (OCTAL) STD ISO CE		CTAL	CHAR	CHAR NAME		CHARCODE(OCTAL) STD ISO CE		
CHAK	NAME	310	130	CE	CHAR	MAINE	310	190	CE	
Α	Α	101	101	101	I	I	111	111	111	
Æ	Æ	341	306	_	Ĭ	Iacute	_	315	315	
Á	Aacute	_	301	301	Ī	Icircumflex	_	316	316	
Ā	Abreve <sup>1</sup>	_	_	303	I	Idieresis	_	317	_	
Ā	Acircumflex	_	302	302	İ	Idotaccent <sup>1</sup>	_	_	_	
Ä	Adieresis	_	304	304	Ì	Igrave	_	314	_	
À	Agrave	_	300	_	Ī	Imacron <sup>1</sup>	_	_	_	
Ā	Amacron <sup>1</sup>	_	_	_	Į	Iogonek <sup>1</sup>	_	_	_	
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Á	Atilde	_	303	_	Ķ	Kcommæcænt <sup>1</sup>	_	_	_	
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С	С	103	103	103	Ĺ	Lacute <sup>1</sup>	_	_	305	
Ĉ	Cacute <sup>1</sup>	_	_	306	Ľ	Lcaron <sup>1</sup>	_	_	274	
Ĉ	Ccaron <sup>1</sup>	_	_	310	Ļ	Lcommaccent <sup>1</sup>	_	_	_	
Ç	Ccedilla	_	307	307	Ł	Lslash	390	_	243	
D	D	104	104	104	M	M	115	115	115	
Ď	Doaron <sup>1</sup>	_	_	317	И	И	116	116	116	

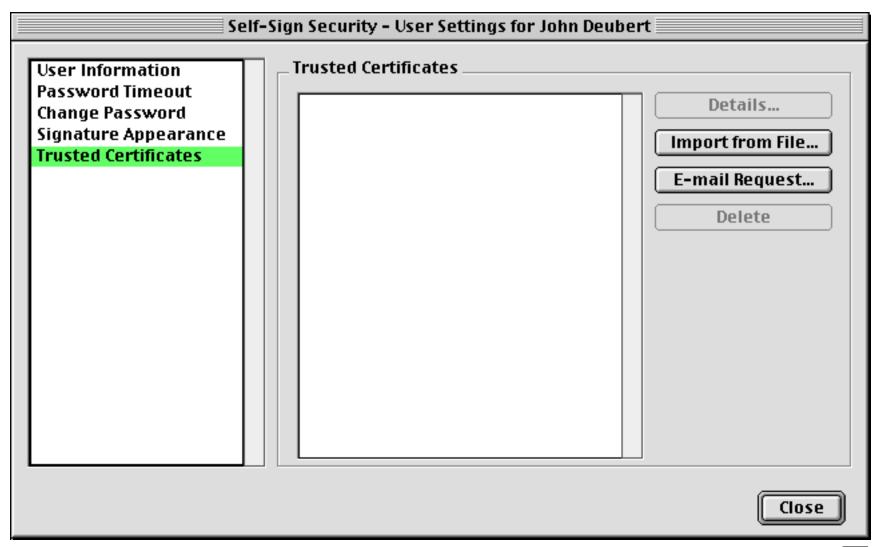








### **Trusted Certificates**





# Verify Identity You are advised to verify the identity of the owner of this certificate. To verify this identity please contact the owner (by phone, email, etc.) and confirm that one of the fingerprint numbers below matches the fingerprint number of their certificate. Click 'Add to List' if a fingerprint number matches and you want to always trust this certificate: the certificate will then be added to your list of 'Trusted Certificates'. Click 'Cancel' if the fingerprints do not match or if you cannot contact the certificate owner. Contact information for certificate owner: Not available Certificate information Wenceslaus Jones Details... Name: MD5 Fingerprint: F925 F389 64AE 8583 4AE7 A3ED 723A B767 SHA-1 Fingerprint | 7AC4 2B0A 58FC E4D0 36D2 3E9F 234D DE5C EB3D 2CC5 Add to List Cancel

### **Imported Certificate**

