



# *CoSign*

**Version 4.4**



## User Guide

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## Chapter 1: Overview

Over the last three decades, the biggest challenge of IT departments in many organizations was moving to a paperless work environment. Seemingly, there was tremendous success in this regard. Today, most transactions in the business world are performed electronically:

- ◆ Documents are written using word processing programs.
- ◆ Messages are sent via email.
- ◆ Inventories and purchases are tracked using Enterprise Resource Planning (ERP) systems.
- ◆ Medical information is stored in Electronic Medical Record (EMR) systems.

Although these transactions are performed in a paperless environment, organizations have still not managed to find an easy way to get rid of the paper used for data authentication (signing the authenticity of the data). Today, although organizations have invested large amounts of funds and other resources in creating paperless environments, their workers are still printing every transaction, signing it, and saving the printed copy. These organizations require a digital method for data authentication.

By moving to a viable electronic data authentication system, organizations can reduce their printing, archiving, shipping, and handling costs. In addition, better and more competitive customer service can often be provided.

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### Requirements for Data Authentication Systems

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A viable data authentication system must meet the following specifications:

- ◆ *Security* – The system must ensure that no one other than the data creator can tamper with or change the data in any way.
- ◆ *Third-party validation* – The system must enable any third party to validate the authenticity of the data. If a dispute arises between the parties (the data creator and recipient), any third party must be able to validate the data authenticity in order to settle the dispute.
- ◆ *System independence* – Data authentication must be independent of the system that created the data. Users must be able to validate the authenticity of the data using a known standard that is independent of any specific system.
- ◆ *Validation over time* – Users must be able to validate data authenticity at any point in time. Authenticity cannot expire at any point.

Currently, the only data authentication method known to support all of these requirements is the Public Key Infrastructure (PKI) method of authenticating data, simply called “digital signatures”.

## Introduction to CoSign

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CoSign is a PKI-based, off-the-shelf digital-signature solution that can be integrated with a wide range of applications. In this way, CoSign enables organizations to embed digital signatures in various documents, forms, and transactions. CoSign is a turnkey, hardware-based solution that is easily and quickly deployed in the network and provides cost-effective digital-signature capabilities for the organization.

CoSign includes all the components needed for PKI-based digital-signature deployment. You do not need to install any other device or integrate any other component for the system to work.

CoSign integrates with leading user management systems, including Microsoft Active Directory, Novell NDS, and LDAP based environments. This integration ensures no overhead in managing the digital-signature system and signature credentials (i.e., the private keys that are needed in a PKI environment), solving one of the main problems of legacy digital-signature systems. System managers, network managers, and end-users can continue to use the IT infrastructure in the same manner as before CoSign was installed.

CoSign stores the signature credentials in a secure server, ensuring that the signer has exclusive access to his or her signature credentials, while still maintaining a centrally managed solution. This is necessary in order to fulfill the security requirement of the data authentication system.

An increasing number of applications can work with CoSign as their digital-signature layer without needing any further integration, including:

- ◆ Microsoft Office 2007 (Word, Excel, and PowerPoint)
- ◆ Microsoft Office XP/2003 (Word, Excel, and PowerPoint)
- ◆ Microsoft Word/Excel 2000
- ◆ Microsoft InfoPath
- ◆ Adobe Acrobat
- ◆ Word Perfect
- ◆ Microsoft Outlook and Outlook Express
- ◆ Adobe Server forms (for signing web forms)
- ◆ AutoCAD
- ◆ Lotus Notes
- ◆ Microsoft BizTalk
- ◆ FileNet eForms
- ◆ Verity Liquid Office
- ◆ ERP systems (e.g., SAP)
- ◆ Crystal Reports



- ◆ OpenOffice (Writer, Calc, etc.)
- ◆ StarOffice (Writer, Calc, etc.)
- ◆ Web applications
- ◆ Any application that has a *print* option can use CoSign to generate a PDF file and sign it

For information on using CoSign with other applications, contact ARX technical support.

CoSign also leads the development of Signature API (SAPI), an API that enables application developers to easily integrate with CoSign. For more information about integrating with CoSign, refer to the *CoSign Programmer Guide (SAPI)*.

CoSign includes the following components:

- ◆ The CoSign appliance hardware and software, connected to the organization's network. For more information, refer to the chapter *Installing CoSign* in the *CoSign Administrator Guide*.
- ◆ The CoSign Client software, installed on the users' computers. For more information, refer to [Chapter 2: Deploying the CoSign Client](#).
- ◆ The CoSign Administrative software that includes the CoSign Microsoft Management Console (MMC) snap-in, installed on the administrative computer. For more information, refer to the chapter *Managing the CoSign Installation* in the *CoSign Administrator Guide*.

## CoSign Guides

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CoSign documentation includes three guides:

- ◆ *CoSign Administrator Guide* – Provides all the information necessary for an administrator to install and manage the CoSign appliance in the various environments in which CoSign can operate.
- ◆ *CoSign User Guide* – Provides all the information necessary for an end user to use CoSign. Includes information about special add-ins for various applications such as Microsoft Office.
- ◆ *CoSign Programmer Guide (SAPI)* – Provides all the information necessary for a developer to interact with CoSign. Three application interfaces (API) are available:
  - ◆ An interface for C/C++ applications.
  - ◆ An interface for COM based applications.
  - ◆ An interface based on Web Services to be used by Application Servers.

## CoSign Appliance Hardware Models

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There are several available hardware models of the CoSign appliance. The models differ in functionality, as follows:

- ◆ *CoSign Enterprise* – The most common CoSign appliance. This rack-mountable box is based on a sealed, tamper-response casing. The hardware box is FIPS 140-2 level 3 validated.
- ◆ *CoSign SSCD* – The CoSign SSCD is very similar to the CoSign Enterprise edition. The major difference is that all end users' private keys are located inside an array of SmartCard chips and the RSA signature operation is performed inside a SmartCard. Each user's key can be used only if a dedicated password is provided for accessing the key. Thus, the end user's private key is considered more protected than in the CoSign Enterprise model. The CoSign SSCD appliance provides a solution that is compliant with the Common Criteria SSCD protection profile (CWA-14169).
- ◆ *CoSign SMB* – CoSign SMB is a digital-signature turnkey solution that meets the needs of smaller organizations. It is an easy-to-deploy and easy-to-use digital-signature appliance that integrates with leading applications. It enables organizations to embed digital signatures that can include a graphical (handwritten) signature. The main differences between CoSign Enterprise and CoSign SMB are that CoSign SMB has a less secure hardware casing (i.e., CoSign SMB does not include hardware-based tamper-evident mechanisms), and CoSign SMB is limited to organizations of no more than 100 users.



**Note:** Throughout this guide, the term “CoSign” refers to all hardware models (*Enterprise, SSCD, and SMB*), and the Desktop model, unless otherwise noted.

## Organization of this Guide

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This guide is organized as follows:

- ◆ *Chapter 1: Overview* – Provides an overview and introduction to CoSign.
- ◆ *Chapter 2: Deploying the CoSign Client* – Describes how to install the CoSign client, install plug-ins for Microsoft Office, Adobe Acrobat and Tiff, set graphical signatures, use CoSign Verifier, and more.
- ◆ *Chapter 3: Signing Microsoft Office Documents* – Describes how to generate and validate digital signatures for Microsoft Office applications, and integrate the digital signatures into the general application flow.
- ◆ *Chapter 4: Signing InfoPath Forms* – Describes how to generate and validate digital signatures for Microsoft InfoPath forms, and integrate the digital signatures into the general application flow.
- ◆ *Chapter 5: Signing Adobe Acrobat Documents* – Describes how to sign and validate an Adobe Acrobat document using Adobe Acrobat or Adobe Reader, as well as how to certify an Acrobat document.

- ◆ *Chapter 6: OmniSign – Sign Any Printable Data, Anywhere* – Describes how to use OmniSign to sign any printable data from any application.
- ◆ *Chapter 7: The ARFileSign Utility* – Describes the `arfilesign.exe` command line utility which can be used to digitally sign any PDF, Tiff, Word/Excel 2007, or Word 2003 file.
- ◆ *Chapter 8: Signing WordPerfect Documents* – Describes how to generate and validate digital signatures using WordPerfect.
- ◆ *Chapter 9: Signing Outlook Emails* – Describes how to generate and validate digital signatures using Microsoft Outlook and Microsoft Outlook Express.
- ◆ *Chapter 10: CoSign Configuration Utility* – Describes how the CoSign Configuration Utility enables the user to set the configuration of any parameter in any of the CoSign client components.
- ◆ *Chapter 11: Troubleshooting* – Offers solutions to various client-related problems you may encounter while running the CoSign Client.
- ◆ *Index* – Provides a comprehensive index of the topics discussed in this guide.



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## Chapter 2: Deploying the CoSign Client

This chapter describes how to:

- ◆ Install the CoSign Client.
- ◆ Install Plug-ins for Microsoft Office, Adobe Acrobat, and Tiff.
- ◆ Use the graphical signature registration application that enables setting a graphical signature for users of the organization.
- ◆ Use CoSign Verifier to validate digital signatures that were attached to applications such as Office using CoSign.
- ◆ Use the CoSign Control Panel to enroll a key based on CoSign SSCD.



**Note:** *The installation of CoSign differs slightly depending on whether it is being installed in a Microsoft Active Directory environment, Novell NDS environment, LDAP based environment, or a Directory Independent environment. These differences are mentioned where applicable.*

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### Installing the CoSign Client

CoSign enables the end-user to digitally sign transactions, documents, and other types of data. In order to perform these tasks, the CoSign client must be installed. The CoSign client enables applications such as Microsoft Word to use CoSign for generating digital signatures. For more information on generating signatures in third-party applications, refer to chapters 3-9.

The CoSign client may be installed on a machine using one of the following operating systems:

- ◆ Windows 2000 Professional.
- ◆ Windows 2000 Server.
- ◆ Windows 2000 Advanced Server.
- ◆ Windows XP Professional.
- ◆ Windows 2003.
- ◆ Windows VISTA.



**Note:** *You must have local administrative rights in order to install the CoSign client.*



**Note:** *In Novell NDS, LDAP, or Directory Independent environments: If the CoSign internal CA is used for generating end user's certificates, then the ROOT certificate must be manually installed on every workstation on which a CoSign client is installed. Refer to [Installing the ROOT Certificate](#).*

## *CoSign Client Components*

The CoSign Client CD displays a *CoSign Client Components Installation* screen when the CoSign Client CD is put into the CD driver.

Each CoSign component is based on several .msi files. The .msi files are based on the Microsoft Software Installation technology.

The components include:

- ◆ ARX CoSign Client – The standard CoSign client installation without any plug-ins.
- ◆ ARX CoSign Admin – Enables administrators to install and manage CoSign. The installation and management activities are described in the chapter *Installing CoSign* and the chapter *Managing the CoSign Installation* in the *CoSign Administrator Guide*.
- ◆ Microsoft Office (Word, Excel, InfoPath) – Three types of plug-ins are supported:
  - ◆ ARX Signature Line Provider – A digital signature plug-in for Office 2007 for the .docx and .xlsx file types.
  - ◆ ARX Legacy Word Add-in – A digital signature plug-in for Word 2000/XP/2003/2007 and Excel 2000/XP/2003/2007 that enables you to sign .doc and .xls files.
  - ◆ Digital signature support for Microsoft InfoPath forms.

For more information, refer to [Chapter 3: Signing Microsoft Office Documents](#) and [Chapter 4: Signing InfoPath Forms](#).

- ◆ Adobe Acrobat – A plug-in for using digital signatures in Adobe Acrobat PDF documents. For more information refer to [Chapter 5: Signing Adobe Acrobat Documents](#).
- ◆ ARX OmniSign Printer – A plug-in for signing any printable data from any application. For more information refer to [Chapter 6: OmniSign – Sign Any Printable Data, Anywhere](#).

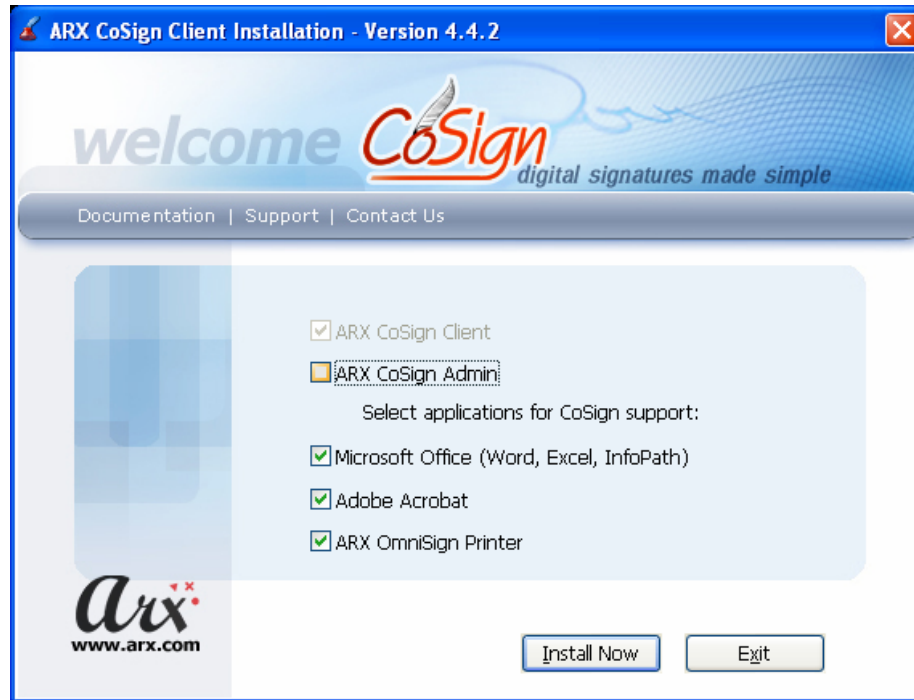
## *Installation Pre-requisites*

- ◆ To perform signatures using Office 2007 upon .docx or .xlsx files, it is mandatory to install .NET Framework version 2 or above in the client machine. The client installation prompts the end user to automatically install .NET framework 2 if it is not already installed.
- ◆ To perform signatures upon .docx or .xlsx files using SAPI, it is mandatory to install .NET Framework version 3 in the client machine. The installation is not performed automatically by the CoSign client installation and should therefore be performed by the user.
- ◆ If you intend to use the ARX add-in for Microsoft Office, you should include the component called "Visual Basic for applications" when installing Microsoft Office. This component is included in the Microsoft Office installation by default.

### *Installing the Client Directly from the CD*

#### **To install the CoSign client directly from the CD:**

1. Insert the ARX CoSign CD into the CD drive. The following *CoSign Client Components Installation* screen appears:



*Figure 1 CoSign Client Components Installation Screen*

2. Select the components you wish to install, based on the designation of the current workstation. Keep in mind the following:
  - ◆ The **ARX CoSign Client** component is always selected.
  - ◆ If the workstation is an administrative workstation, select the **ARX CoSign Admin** component.
  - ◆ If the workstation is a user workstation, select the applicable components (**Office**, **Adobe** or **OmniSign**).



**Note:** *The Office and Adobe components are automatically selected if Office or Adobe is installed in the end-user machine.*



**Note:** *The OmniSign Printer component installs a new virtual printer in the end-user's machine.*

3. Click **Install Now**.

When installation is complete, a ✓ appears next to each of the installed components. In case of a failure, an X appears next to the relevant components and a summary information box appears.

Alternatively, you can place the contents of the CoSign CD on the network so that end users can install the CoSign Client through the network. While this method eliminates the need to use the CD for each installation, it does not facilitate automatic installations of the software.

## Uninstalling the CoSign Client

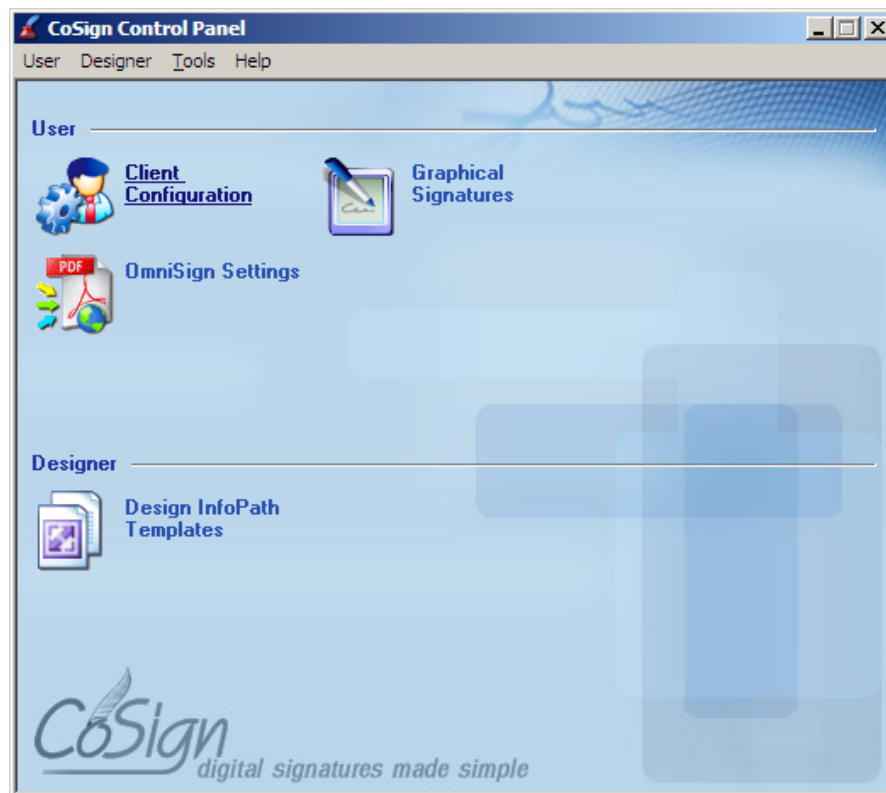
To uninstall the CoSign client locally:

1. Open the **Start** menu and select **Programs → ARX CoSign → Uninstall CoSign Components**.
2. A confirmation box appears. Click **Yes** to uninstall. The uninstalling process begins.
3. When the CoSign Client is uninstalled from the workstation, a message box appears to inform you that the system finished uninstalling. Click **OK**.

## Using the CoSign Control Panel

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Starting from CoSign version 4, all client-based operations are activated through the CoSign Control Panel.



*Figure 2 CoSign Control Panel*

Some Control Panel options are always active, while others are active depending on the status of the CoSign appliance (Installed/Not Installed), the type of CoSign appliance installation



(Microsoft Active Directory, Novell NDS, LDAP, or Directory Independent), or whether the CoSign client is in stand-alone mode (CoSign Desktop).

## User Actions

**Client Configuration** – This option enables the end user to configure the CoSign client settings. Refer to [Chapter 10: CoSign Configuration Utility](#) for more information.

**Graphical Signatures** – This option enables both end users and administrators to manage personal graphical signatures. For more information refer to [Using the Graphical Signature Management Application](#).

**Change User Password** – This option is relevant only in the case of a Directory Independent environment. For more information refer to [Directory Independent Environment Options](#).

**OmniSign Settings** – This option activates the OmniSign application in configuration mode. In this mode the user can setup the appearance and other parameters related to the digital signature created using OmniSign. For more information related to OmniSign, refer to [Chapter 6: OmniSign – Sign Any Printable Data, Anywhere](#).

**Logoff** – This option logs off from the session. This option is relevant when CoSign is installed in a Directory Independent environment, Novell NDS environment, or any other configuration where the user needs to login manually.

## Directory Independent Environment Options

The following options are relevant only for a Directory Independent environment:

- ◆ **Client Configuration** – see the explanation in [User Actions](#).
- ◆ **Graphical Signatures** – see the explanation in [User Actions](#).
- ◆ **Change User Password** – see the explanation in [User Actions](#).
- ◆ **OmniSign Settings** – see the explanation in [User Actions](#).
- ◆ **Logoff** – see the explanation in [Changing the Password in a Directory Independent Environment](#).



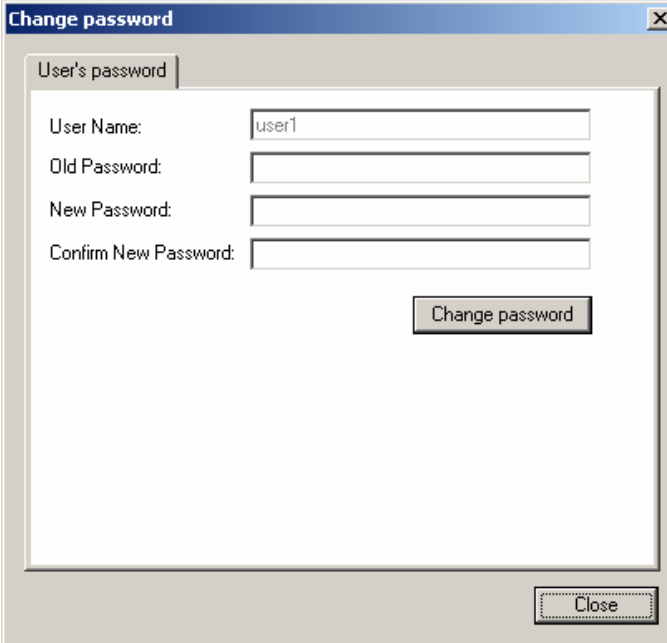
*Figure 3 CoSign Control Panel – Directory Independent Environment*

### ***Changing the Password in a Directory Independent Environment***

**To change your password when CoSign is installed in a Directory Independent environment:**

1. Click **Change User Password** in the CoSign Control Panel ([Figure 3](#)).

The *Change Password* window appears.



*Figure 4 Change Password in Directory Independent Environment*

2. Enter your user name.
3. Enter the old password of the account and the new password of the account. Confirm the new password.
4. Click **Change password**.

## Designer Actions

**Design InfoPath Templates** – This option is relevant for the design of InfoPath templates that include CoSign based digital signature. Refer to [Chapter 4: Signing InfoPath Forms](#).

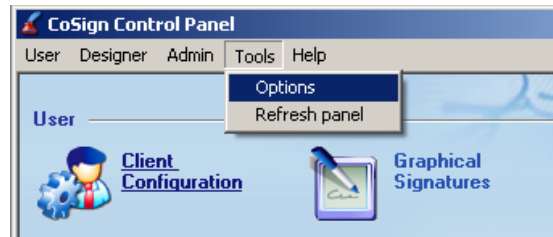
## Administrator Actions

For administrative operations see the *CoSign Administrator Guide*.

## CoSign Control Panel Menu Bar

The **User**, **Designer** and **Admin** options of the CoSign Control Panel menu bar display all the options that can be activated from the Control Panel.

In addition, the Tools option includes two options.



*Figure 5 CoSign Control Panel Menu Bar*

**Options** – This enables you to configure CoSign Control Panel settings. When you select **Options** from the **Tools** menu, the following dialog box appears:



*Figure 6 CoSign Control Panel Settings*

- ◆ **Show CoSign Control Panel in system tray** – Check this option to display the CoSign Control panel in the system tray when the Control Panel is activated.
- ◆ **Personal graphical signatures management** – In a regular client installation this option is always marked. When this option is checked, the graphical signature application is activated in user mode. If the option is unchecked and the CoSign administrative client is installed, the graphical signature application will operate in administrative mode. For more information, refer to [Using the Graphical Signature Management Application](#).

**Refresh** – This option updates the icons in the control panel according to the updated state of the CoSign appliance.

## CoSign Control Panel – Tray Item

The CoSign control panel icon appears in the tray if the option **Show CoSign Control Panel in the system tray** is selected. Right-click the icon to display a popup that enables you to perform the following operations:

- ◆ **Open control panel** – Maximizes the control panel.
- ◆ **Change password** – Relevant only for a Directory Independent environment.
- ◆ **SSCD Key Enrollment** – Relevant only for a CoSign SSCD appliance. The Activate Your Default Signing Key window appears ([Figure 8](#)).
- ◆ **Logoff** – Relevant only if the user is prompted to authenticate in a Directory Independent environment, or is configured to **prompt for logon**.

- ◆ **Exit** – Closes the CoSign control panel.

## Operating the Control Panel for a CoSign SSCD Appliance

When CoSign SSCD hardware is used, the procedure of generating a key and a certificate for a user is different from the one followed for a regular CoSign appliance. This is due to the requirement that only the end user can select the password that protects the user's key.

- 👉 **Note:** *Keep in mind that the passwords that protect each of the SSCD-based user's keys are different from the password that protects the user account (Active Directory password, Novell NDS password, LDAP password, or Directory Independent password).*

### To enable you to sign documents using an SSCD key:

1. Upon user creation, either during installation or after the installation, the CoSign appliance generates a user account and sends you an email notification, directing you to enroll for a key.

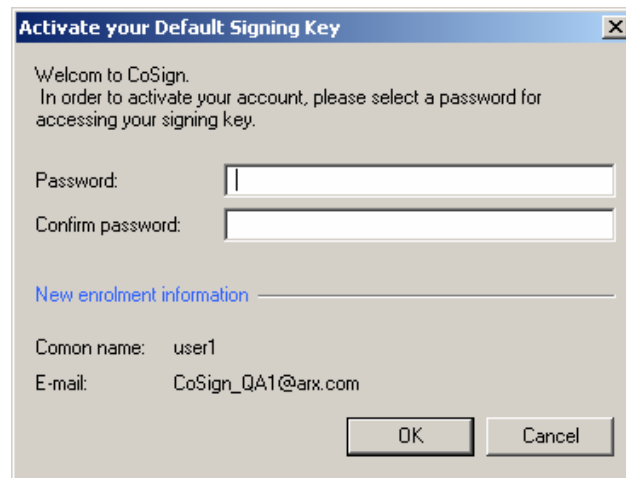


**Figure 7 Request to Enroll**

2. Click **Enroll**.

The Activate your Default Signing Key window appears.

- 👉 **Note:** *Alternatively, you can enroll by activating the CoSign Control Panel and clicking **Activate your SSCD key**. The Activate Your Default Signing Key window appears. In addition, when activating for the first time any application that can potentially sign using CoSign, the Activate your Default Signing Key window appears.*



*Figure 8 Activate Your Default Signing Key*

3. In the *Activate your Default Signing Key* window enter the password that will protect the SSCD key, and confirm it.

When you click **OK**, the key is generated inside the CoSign SSCD hardware. The CoSign appliance may also generate a certificate for you, depending on the certification model. You are informed that the key and certificate are ready for use and you can start signing documents.

4. Whenever you use an SSCD key for a digital signature operation, you are prompted to enter a password.



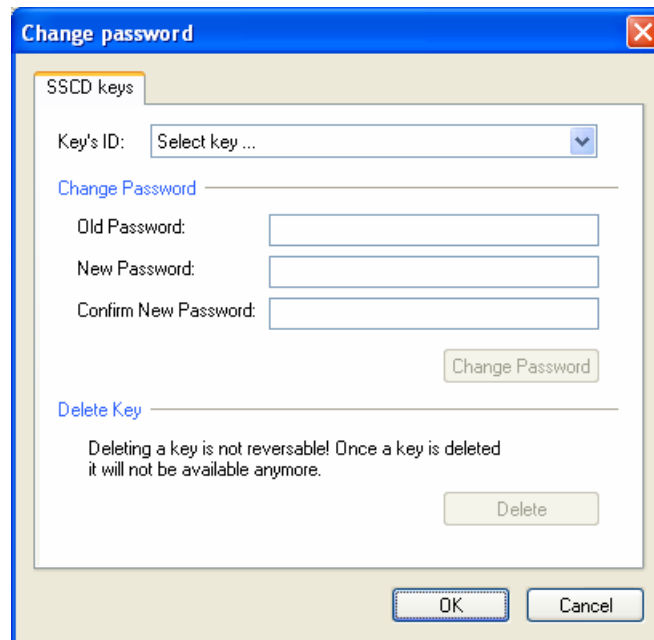
*Figure 9 Password Entry When Signing with an SSCD Key*

### *Updating SSCD Keys*

**To update SSCD keys:**

1. Click **Update your SSCD keys** in the CoSign Control Panel.

The *Change password* window appears.



*Figure 10 Change Password – Updating SSCD Keys*

2. Enter a key in the **Key's ID** field.
3. You can perform the following on the selected SSCD key:
  - ◆ **Change Password** – Enter the old password and the new password, and confirm the new password.
  - ◆ **Delete Key** – Click **Delete** to delete the selected SSCD key. If you wish to sign documents, you must enroll for a new key.



**Note:** *Deletion of an SSCD key does not automatically delete its matching certificate.*

## Using the Graphical Signature Management Application

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The Graphical Signature Management application enables you to view all your graphical signatures and create a new graphical signature. This graphical signature can be attached to all Microsoft Word, Excel, InfoPath, and Adobe Acrobat documents that you sign.

The Graphical Signature application is automatically installed together with the ARX CoSign Client component.

The Signature application can be used in either of two modes of operation:

- ◆ **Administrative Mode** – An administrator station is used for registering the user's graphical image. The user will supply his/her identity and password after which the user can register or view his/her own graphical images.
- ◆ **User Mode** – The user can register or view his/her own graphical images.

## Installing the Signature Registration Device

The CoSign appliance is supplied with a graphical signature registration device.

There are several types of signature capture pads you can use:

- ◆ Signature capture pads produced by Topaz Systems (<http://www.topazsystems.com>). Two models are available:
  - ◆ SigLite LCD 1x5 USB – This model includes an LCD capture device. The entered graphical signature appears on the LCD screen.
  - ◆ SigLite 1x5 USB – This model does not include an LCD capture device.



*Figure 11 SigLite LCD 1x5 USB*

- ◆ Signature capture pads produced by Interlink Electronics (<http://www.interlinkelectronics.com>). Two models are available:
    - ◆ ePad-ink - This model includes an LCD capture device. The entered graphical signature appears on the LCD screen.
    - ◆ ePad – This model does not include an LCD capture device.
- Note that the signature registration devices can be installed only on machines on which the CoSign admin client is installed.





*Figure 12 ePad-ink*



*Figure 13 ePad*

**To install the graphical signature registration device:**

- ◆ Connect the signature capture pad to the USB port on the workstation. The pad's drivers are automatically installed.

## **Managing Graphical Signatures**

**To manage your graphical signatures:**

1. Open the **Start** menu and select **Programs** → **ARX CoSign** → **CoSign Control Panel**. The CoSign Control Panel appears.
2. If the signature application is operating in administrative mode and you would like it to operate in user mode, perform the following:
  - ◆ Select **Options** from the **Tools** menu in the Control Panel. The Control Panel Settings window appears ([Figure 6](#)).
  - ◆ Check the **Personal graphical signatures management** option.

- In the Control Panel click **Graphical Signature**. The *ARX Graphical Signature Viewer* dialog box appears, for managing your graphical signatures.



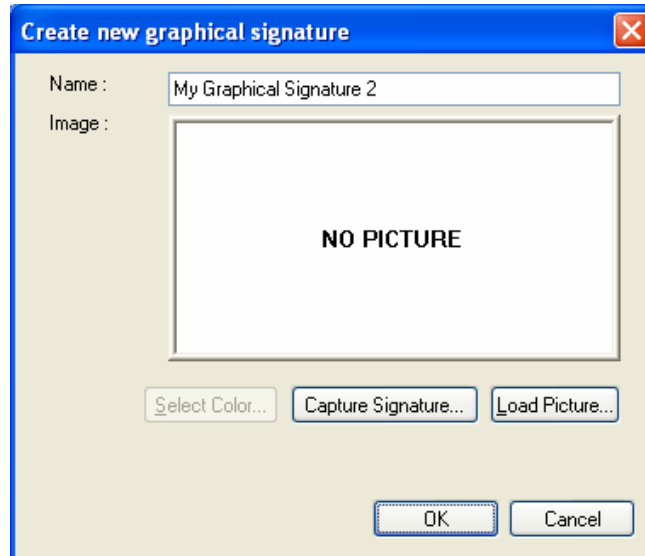
**Note:** This dialog box can also be activated from a SAPI based application such as *OmniSign* for the purpose of selecting a graphical image to incorporate into the digital signature. When selecting, the user can either add a new graphical image or select a temporary graphical signature (*One-time Signature*).



*Figure 14 ARX Graphical Signatures Viewer Dialog Box*

- The lower part of the dialog box contains a list of all the user's graphical signatures. For each item in the list you can view its corresponding graphical image.
- You can activate the following buttons:
  - ◆ **New** – Creates a new graphical image. Images can be loaded either from a file or from the signature pad.
  - ◆ **Delete** – Deletes an existing graphical image. The currently selected graphical image is deleted.
  - ◆ **Edit** – A new graphical image replaces the existing one.
  - ◆ **Update Acrobat** – The graphical image defines a new appearance with the name *ARX Signature - <graphical signature label>*. This appearance, which includes the graphical image, can be selected in every signature operation (refer to [Chapter 5: Signing Adobe Acrobat Documents](#)). This option is enabled only when operating in user mode and not in administrative mode.

- ◆ **One-time Signature** – This option is mainly relevant to cases where the dialog box is invoked from applications such as OmniSign. In this case, you can add a graphical image that will be used only for the specific digital signature operation. This option invokes the same operation as the **Capture Signature** option described in the next step. The new graphical image is deleted when this dialog box is closed.
6. If you click either New or Edit, the *Create new graphical signature* dialog box appears.



*Figure 15 Create new graphical signature Dialog Box*

The display area displays the current graphical image.

The following options are available:

- ◆ **Load Picture** – Use this option to load an image file into CoSign. The possible types of images are: monochrome bmp, multicolor bmp, or jpg.
- ◆ **Capture Signature** – The following signature capturing options appear if you specify *manual* in the *Capturing Device ID* parameter in the SAPI section. For each option, a dialog box appears, directing you to enter the graphical signature. Click **OK** in the dialog box to load the graphical signature you create into CoSign
  - ◆ **Using a pad** – Use this option when it is required to enter the graphical image using a signature registration pad. Use the pad as described in [Installing the Signature Registration Device](#). If you are using a signature registration device with no LCD display, you will be able to see the signature only on the PC screen, while editing it.  
If you are using a signature registration device with an LCD display, you will be able to see the signature both on the device and on the PC screen while editing it.
  - ◆ **Using a mouse or Tablet PC** – Use a Tablet PC and a pen or a regular PC mouse to enter a new graphical image. Any movement of the mouse or pen in the tablet PC is drawn in the Capture Signature window that appears. Click **Clear** to re-start the capture.



**Figure 16** Capture Signature Dialog Box – Using a Mouse or a Tablet PC


- ◆ **Using a script font** – Specify a script font and an input text for generating a graphical image. In the Capture Signature window that appears, enter the desired text and click **Font** to select a script font. The displayed text is the new graphical image.



**Figure 17** Capture Signature Dialog Box – Using a Script Font

- ◆ **Select Color** – In the case of a monochrome bmp image, you can select the color of the graphical image. If you click this button, a standard Microsoft color selection window appears, enabling you to select the desired color of the graphical image.

 **Note:** Graphical signatures are stored in the CoSign's users database as graphical objects.

 **Note:** The first time you register a signature you must have local administrative rights. Afterwards, any user can register a signature.

## Installing the ROOT Certificate for Validation Purposes

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This procedure for installing the ROOT certificate is *not* required in the following cases only:

- ◆ CoSign is installed in a configuration where an external CA is used (if the users' certificates are provided by a World Wide verifiable CA, the ROOT certificate is already installed in the verifier's PC).

- ◆ The organization is deploying a CoSign Verifier home page (refer to [Using CoSign Verifier for Validation Purposes](#)). The end user already uses these pages to install the organization ROOT certificate.

The sections below describe how to install the ROOT certificate.

An end user in an organization without CoSign who wishes to validate signatures that were originated by CoSign, must obtain the ROOT certificate of the organization that signed the document. The ROOT certificate is a `.cer` file that is installed on the end user's workstation either automatically or manually by the end user.



**Note:** *If CoSign is installed as a subordinate CA, you must make sure that the ROOT CA certificate is installed in the end user's machine.*



**Note:** *Alternatively you can use the client configuration utility to download the CoSign ROOT certificate to a file. Use the **Download CoSign CA Certificate** option in the CA menu (refer to [CoSign Configuration Utility Menus](#)).*

## Installing the ROOT Certificate

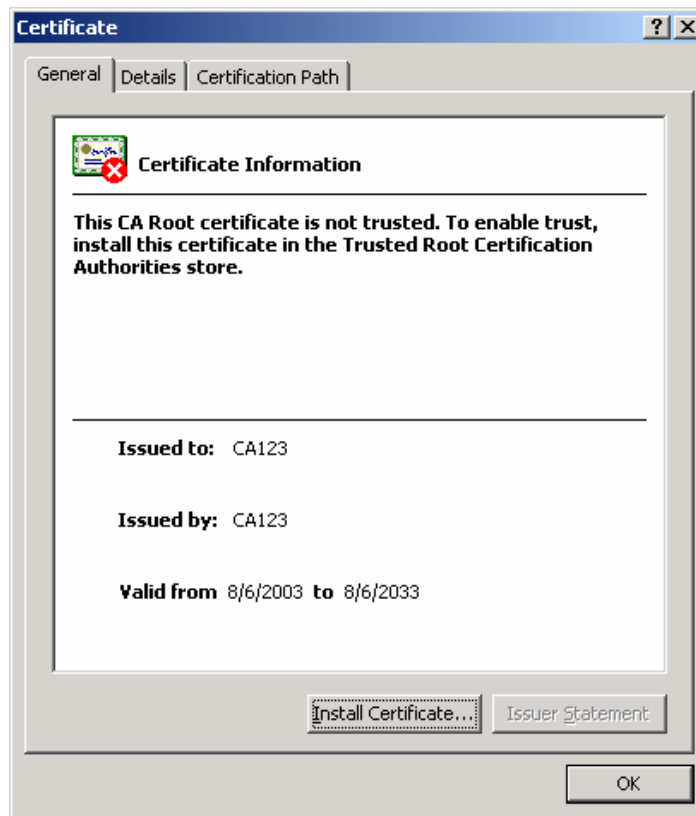
The ROOT certificate needs to be installed on the end user's workstation to enable proper validation of signatures. There are two methods for installing the ROOT certificate:

- ◆ Direct installation.
- ◆ Adding the ROOT certificate to a trusted CA list in the Active Directory of the domain of the organization that does not have CoSign.

### *Direct Installation*

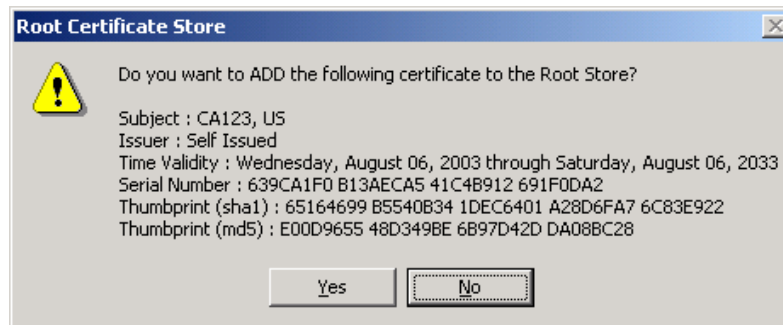
#### **To install the ROOT certificate:**

1. On the end user's workstation, double-click the `.cer` file and follow the instructions in the wizard that appears.
2. When the *Certificate* dialog box appears, click **Install Certificate** ([Figure 18](#)).



*Figure 18 Certificate Dialog Box*

3. Click **Yes** in the *Root Certificate Store* dialog box.



*Figure 19 Root Certificate Store Dialog Box*

The ROOT CA Certificate is installed on your PC, enabling you to validate signatures.

For more information on how to automatically install the ROOT certificate, see the *CoSign Administrator Guide*.

## Using CoSign Verifier for Validation Purposes

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If you are not using CoSign, you can still validate digital signatures that were attached to Microsoft Office documents using CoSign. To do so, you need to install the CoSign Verifier.

The CoSign Verifier is installed via a web interface. It can be installed either by connecting to ARX's web page <http://www.arx.com/support/downloads.php>, or by connecting to the organization's web page, which you can set up as described in *Installing the CoSign Verifier*.

Installation of the CoSign Verifier provides the following functionality:

- ◆ Installation of an Office verifier capable of verifying Word and Excel digital signatures. For more information on verifying Word or Excel documents, refer to *Chapter 3: Signing Microsoft Office Documents*.
- ◆ Installation of an organizational ROOT certificate.
- ◆ Automatically setting Adobe 6, 7 and 8 configuration parameters to enable signature verification without having the end user manually set any parameters. For more information refer to *Chapter 5: Signing Adobe Acrobat Documents*.



**Note:** If you install the CoSign verifier from the [www.arx.com](http://www.arx.com) site, the ROOT of ARX is installed. It is therefore recommended to deploy the web-based installation as part of the organization web site, and use the organization ROOT certificate. The deployment is described in the CoSign Administrator Guide.



**Note:** If a World Wide verifiable external CA is used, there is no need to install the ROOT certificate since it is already installed in the verifier's PC.



**Note:** Validating a signature in Adobe Acrobat 6/7/8 does not require a plug-in, and is based on the internal comprehensive digital signature functionality of Adobe Acrobat 6/7/8.

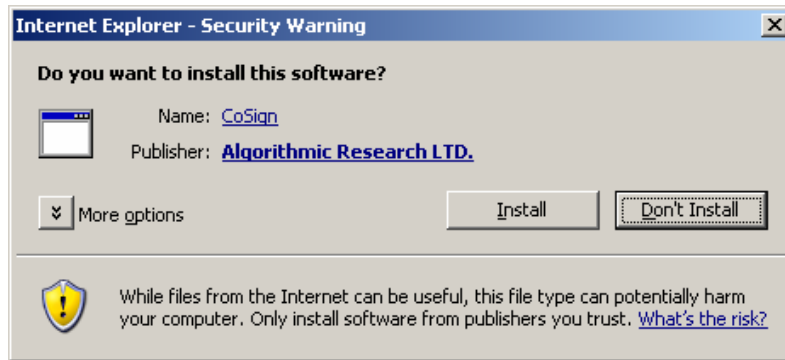
The following sections provide information on how to deploy the CoSign Verifier in the customer web site, and how to install the CoSign Verifier from the web site.

### Installing the CoSign Verifier

#### To install the CoSign Verifier:

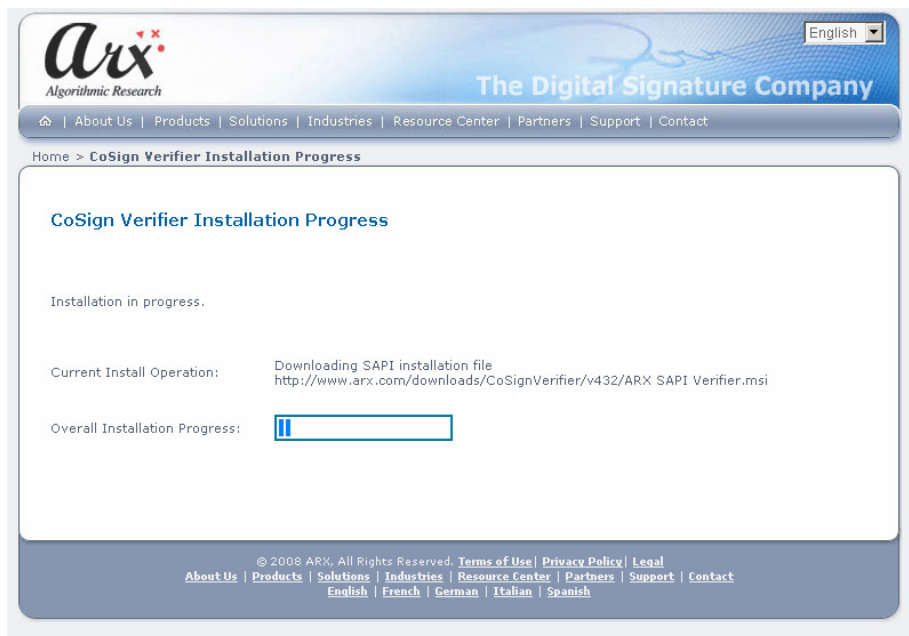
1. Click the CoSign Verifier deployment web page. For example, if you choose to download the CoSign Verifier from the ARX web site, click <http://www.arx.com/support/downloads.php>.
2. Acknowledge the verifier installation by right-clicking the upper section of the web page and activating the *Install Active X* option.

The following window appears:

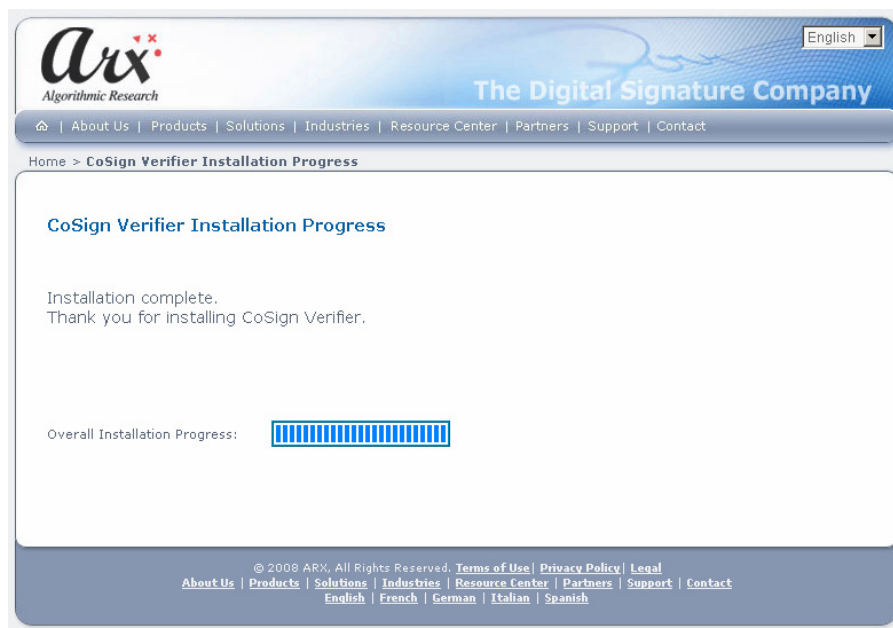



- 3. Click **Install** to continue with the installation.

The following web pages indicate the progress of the CoSign Verifier installation.







 **Note:** If you use VISTA in user mode, you must turn off the **Enable Protected Mode** flag in the Security tab of the Internet Options dialog. You can turn the flag back on after installation is complete.



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## Chapter 3: Signing Microsoft Office Documents

CoSign enables generating and validating digital signatures for Microsoft Office applications, and integrating the digital signatures into the general application flow. CoSign supports integration with the following applications:

- ◆ Office 2007 documents – Refer to [Signing Office 2007 Documents – New Document Style](#).
- ◆ Word 2000, Word XP and Word 2003 – Refer to [Signing Word and Excel Documents – Office 2000/XP/2003 Style](#).
- ◆ Excel 2000, Excel XP, Excel 2003 – Refer to [Signing Word and Excel Documents – Office 2000/XP/2003 Style](#).
- ◆ PowerPoint XP, PowerPoint 2003 – Refer to [Signing PowerPoint XP/2003 Documents](#).
- ◆ InfoPath 2003 – Refer to [Chapter 4: Signing InfoPath Forms](#).

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### Signing Office 2007 Documents – New Document Style

CoSign enables you to add digital signatures, as well as graphical signatures, to .docx and .xlsx Office 2007 documents using a special plug-in called ARX Signature Line Provider. To enable the plug-in, you must install the ARX CoSign Client and ARX's Microsoft Office (Word, Excel, InfoPath) client components. For information on installing these components, refer to [Installing the CoSign Client](#).

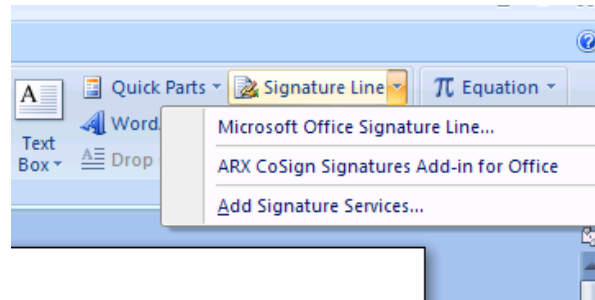
The signing process and the configuration of its various options are carried out using the ARX Office Signatures Line Provider. This provider fits into the signature line provider concept in Office 2007.

The basic signing process consists of placing signature place-holders (or *signature fields*) in the desired locations in the document, and signing each field. After signing, you can validate the signatures. Validation assures you that the document was not modified after it was signed and that a trusted CA approved the signers' certificates.

You can also activate the ARX Legacy Word Add-in plug-in on pre-2007 .doc or .xls files when using Office 2007. For more information refer to [Signing Word and Excel Documents – Office 2000/XP/2003 Style](#).

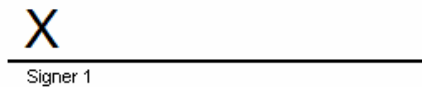
#### Adding Signature Fields in Office 2007

Use the **Insert** tab's special **Signature Line** option to add a new signature field (see [Figure 20](#)). Click **ARX CoSign Signatures Add-in for Office**.



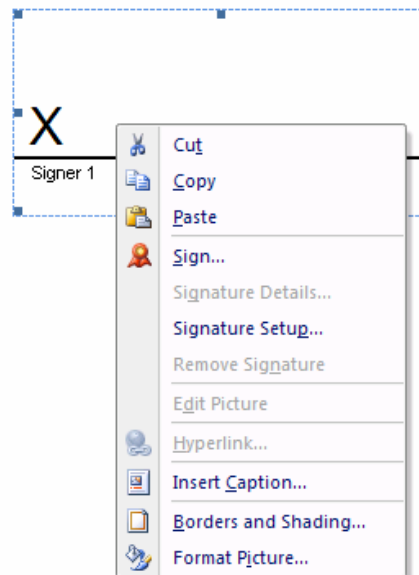
*Figure 20 Selecting the ARX CoSign Signatures Add-in for Office*

A new signature field is generated and embedded inside the Office 2007 document.



*Figure 21 Creating a New Signature Field in an Office 2007 Document*

You can perform several operations on this field using the right mouse click, as shown in [Figure 22](#).



*Figure 22 Signature Field Right-Click Options in Office 2007*

The following two operations are relevant to an empty signature field:

- ◆ **Sign** – Performs the digital signature upon the empty signature field. Refer to [Signing Empty Signature Fields in Office 2007](#) for a full description of the digital signature operation.

- ◆ **Signature Setup** – Refer to [Configuring Signature Settings in Office 2007](#).

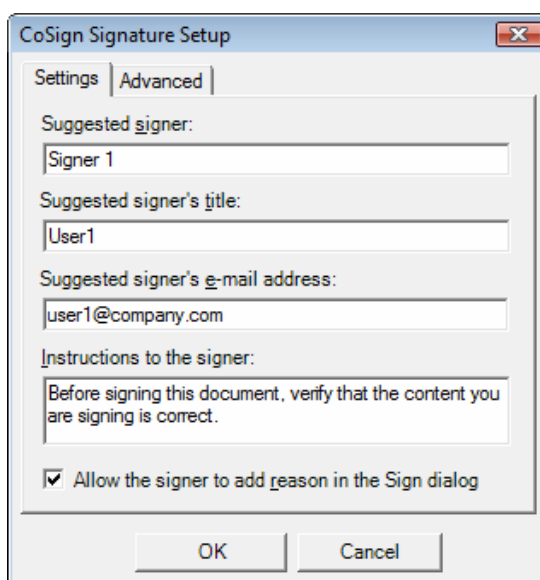
All other operations in the popup menu are applicable to the empty signature field object and are standard Office 2007 operations upon displayable objects.

## Configuring Signature Settings in Office 2007

The following sections describe how to configure signature settings in Office 2007.

### *CoSign Signature Setup in Office 2007 – General Settings*



When you select **Signature Setup** from the right-click menu of a signature field (see [Figure 22](#)), the *CoSign Signature Setup* dialog box appears, with the **Settings** tab displayed.



*Figure 23 CoSign Signature Setup in Office 2007 – Settings Tab*

This dialog box enables you to define several parameters of the signature field. Some of these parameters will be displayed in the signature field and others are used during future signature operation. The parameters include:

- ◆ **Suggested signer** – The name of the person who is required to sign this signature field. This parameter is displayed as part of an empty signature block.
- ◆ **Suggested signer's title** – The role of the person who is required to sign this signature field. This parameter is displayed as part of an empty signature block.
- ◆ **Suggested signer's e-mail address** – The email address of the person required to sign this signature field.
- ◆ **Instructions to the signer** – The text displayed to the signer during the Sign operation.
- ◆ **Allow the signer to add reason in the Sign dialog** – If this option is selected, the signer will be able to add a reason. If you wish this reason to display in the signature field, check the **Show Reason** field in the **Advanced** tab.

-  **Note:** Some of the parameters in the **Settings** tab can be used to enable SAPI to locate a certain signature, thus providing the ability to perform digital signatures through SAPI.
-  **Note:** If you want the CoSign Signature Setup dialog box to appear upon creation of each signature field, refer to [Setting Microsoft Office Configuration](#).

### CoSign Signature Setup in Office 2007 – Advanced Settings

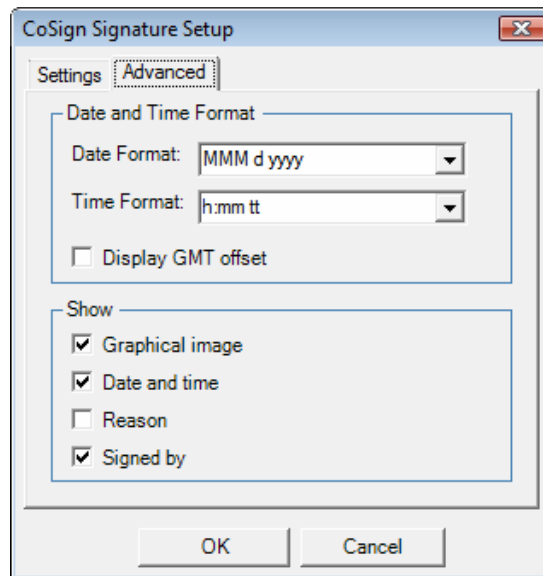


Figure 24 CoSign Signature Setup in Office 2007 – Advanced tab

The **Advanced** tab of the *CoSign Signature Setup* dialog box includes the following parameters:

- ◆ **Date and Time Format** – Set the displayed format of the signature date and time.
- ◆ **Show Graphical Image** – Specify whether to display a graphical image as part of the digital signature.
- ◆ **Show Date and time** – Specify whether to display date and time as part of the digital signature.
- ◆ **Show Reason** – Specify whether to display the reason for signing as part of the digital signature.
- ◆ **Show Signed by** – Specify whether to display the name of the signer.

### Signing Empty Signature Fields in Office 2007

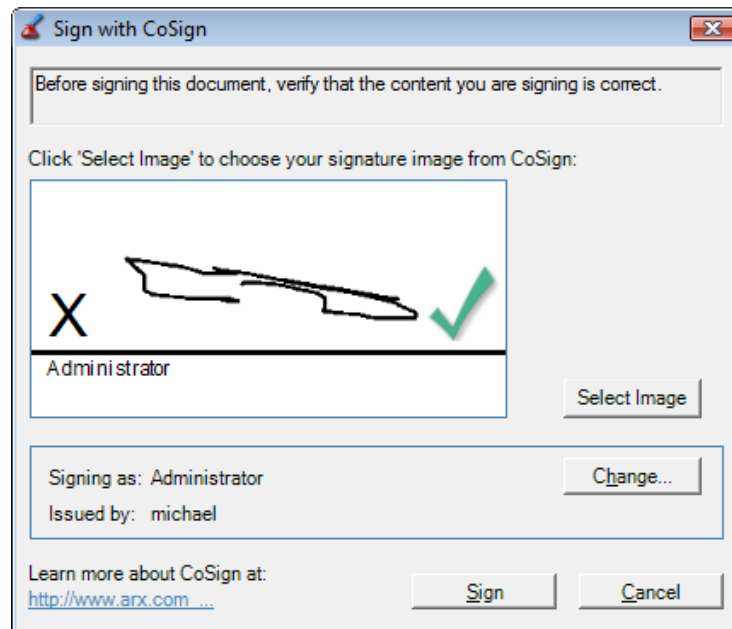
You can sign the content of an Office 2007 document by right-clicking an empty signature field and selecting **Sign** from the popup menu. After performing the Sign operation, nothing can be changed in the document except that other users can sign other empty fields inside the document.

**To sign the content of an Office 2007 document:**

1. Right-click an empty signature field and select **Sign** from the popup menu.

If you have more than one certificate or more than one graphical image, or are required to enter a reason for the signature, the *Sign with CoSign* dialog box appears.

2. If the *Sign with CoSign* dialog box appears, fill in the following fields and then click **Sign**.



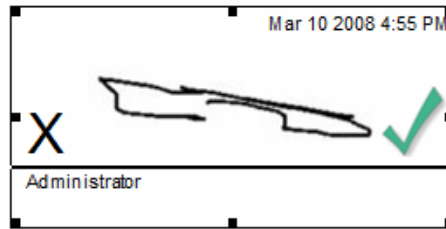
*Figure 25 Signing with CoSign in Office 2007*

The dialog box may contain some or all of the following sections:

- ◆ **Select Image** – Clicking this button enables changing the graphical signature that will be embedded inside the digital signature. The display area of the window shows the current display of the digital signature.
- ◆ **Change** – Clicking this button enables you to select the certificate to be used as part of the digital signature operation.
- ◆ **Reason for signing this document** – If entering a reason is required, select a reason from the predefined list or use a specific reason for this signature operation.
- ◆ **Additional information** – This link directs the user to the ARX web site for more information.

A digital signature operation is performed using the CoSign appliance based on parameters that were defined in the *Sign with CoSign* dialog box (see [Figure 25](#)) and the *CoSign Signature Setup* dialog box ([Figure 23](#))

The following figure shows a sample output of the digital signature operation.



*Figure 26 Sample Digital Signature in Office 2007*

In this example, the top right of the digital signature includes the signature date. The center of the graphical signature includes the selected graphical image. If a graphical image was not selected, the signer's name is displayed in a special script font. The reason is displayed beneath the signature line, as well as the signer's name if an image was selected.

The following figure shows a not validated digital signature.



*Figure 27 Sample Invalid Digital Signature in Office 2007*



**Note:** *It is possible to generate an invisible digital signature. Refer to the SAPI documentation for information on how to generate an invisible digital signature.*

## Validating and Viewing Digital Signatures in Office 2007

In an Office 2007 document (.docx or .xlsx file), the visual display of the digital signature indicates the validity of the digital signature. If an existing digital signature is invalid, it will be indicated in the document.

The following options are available when you right-click a signed digital signature field:



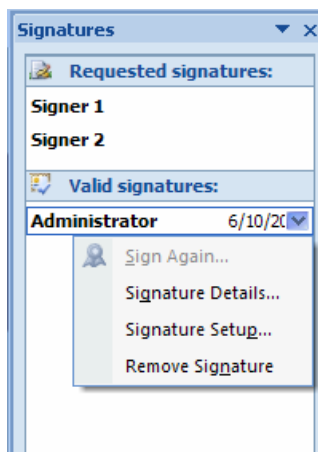


Figure 28 List of Digital Signatures in Office 2007

- ◆ **Signature Details** – Displays information related to the digital signature and the signer’s certificate, as shown in [Figure 29](#).

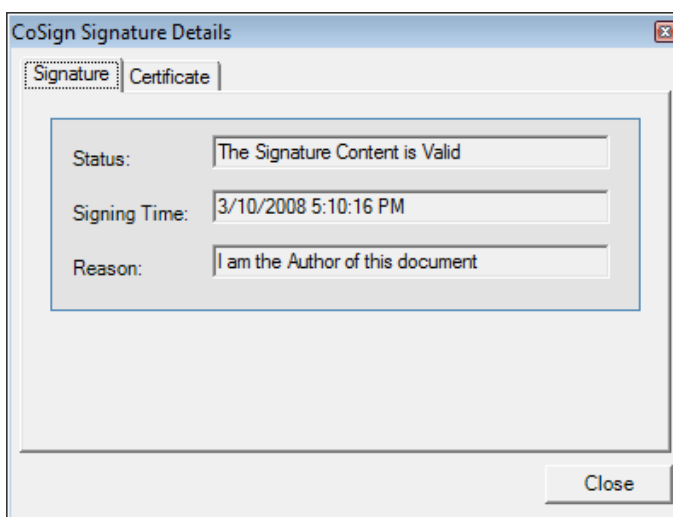



Figure 29 CoSign Signature Details in Office 2007 – Signature tab

- ◆ **Signature Setup** – Displays signature setup without the ability to modify the values. The fields you can view are described in [Configuring Signature Settings in Office 2007](#).
- ◆ **Remove Signature** – Enables the user to remove the signature. After this operation is acknowledged, the empty signature field is displayed.

 **Note:** The option **Sign Again** is not relevant for the ARX Signature Line Provider.

Digital signatures are also listed in a special list of digital signatures that appears to the right of the document. To display the digital signatures list, either select the **Prepare/View signatures** option from the main icon of Office 2007, or select the digital signature seal indication in the lower left side of the Office window.

The digital signature seal indication appears only if there is a signature inside the document.



In the list you can see all unsigned signature fields and existing digital signatures of the document. The right-click options available in the list are the same as those available by right-clicking a digital signature or empty signature field inside the document.

## Validating Office 2007 Signatures

The following sections describe how a user who is not using CoSign can validate graphical signatures that were attached using CoSign in Office 2007. The digital signatures can be validated without having to install ARX Signature Line Provider.

### *Validating Graphical Signatures in Word Documents Without Using the ARX Signature Line Provider*

Using ARX Signature Line Provider for signing documents does not require installing any plug-in for verifying the documents. This is useful if you receive documents from a company or organization that uses CoSign internally.

If the signer's certificate was created by a WorldWide verifiable CA, you need not perform any action prior to the validation process.

#### To validate signatures:

1. Obtain the organization's ROOT CA Certificate (.cer file) from a reliable representative of the organization using CoSign.
2. Install the organization's ROOT CA Certificate (refer to [Installing the ROOT Certificate](#)). Alternatively, install the organization's ROOT CA Certificate using the web-based ARX verifier software.



**Note:** *If an external CA is used, or the CoSign certificate is based on a WorldWide verifiable CA, there is no need to install the ROOT certificate.*

3. Validate the signature (refer to [Validating Signatures](#)).



**Note:** *Although you are able to view the digital signature, you cannot activate the **Signature Settings** and **Signature Details** options. Microsoft Office will validate the digital signature and display the valid/invalid image according to the validity of the digital signature.*

## ARX Office 2007 – CoSign Signatures Toolbar (Ribbon)

The ARX Office 2007 Signature Line Provider includes a Toolbar (Ribbon) that provides the following functionality:

- ◆ **Sign** – Performs a “One Touch Signing” operation. This option both creates a new signature field in the mouse location and performs a signature operation upon the new field. Refer to [Adding Signature Fields in Office 2007](#) and [Signing Empty Signature Fields in Office 2007](#).

- ◆ **Add Signature Field** – Creates a new signature field in the mouse location. Refer to [Adding Signature Fields in Office 2007](#).
- ◆ **Help** – Displays the CoSign help module. This option is similar to selecting **Help** in the ARX Legacy Add-in.
- ◆ **About** – Displays the CoSign Signature Line Provide About window. The window lists the current version of the ARX Signature Line Provider and some general ARX information.

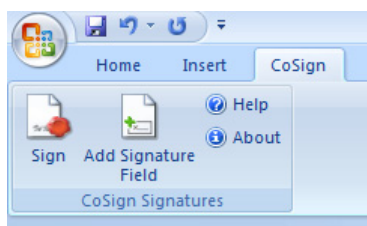



Figure 30 ARX Office 2007 Signature Line Provider Toolbar (Ribbon)

## Signing Word and Excel Documents – Office 2000/XP/2003 Style

CoSign enables you to add digital signatures, as well as graphical signatures, to Word and Excel documents in Office 2000, Office XP, Office 2003 and Office 2007, using the ARX Legacy Word Add-in plug-in. To enable the plug-in, you must install the ARX CoSign Client and ARX's Microsoft Office (Word, Excel, InfoPath) client components. For information on installing these components, refer to [Installing the CoSign Client](#).

 **Note:** Starting from CoSign 4.4, you can use the ARX Legacy Word Add-in and ARX Legacy Excel Add-in also for *.docx* and *.xlsx* files, in addition to *.doc* and *.xls* files.

### Overview

The signing process and the configuration of its various options are carried out using the ARX Legacy Word Add-in toolbar and the signatures' right-click menu.

The basic signing process consists of placing signature place-holders (or *signature fields*) in the desired locations in the document, and signing each field. After signing, you can validate the signatures. Validation assures you that the document was not modified after it was signed and that a trusted CA approved the signers' certificates.

During the signing phase, entering *Design mode* provides the options of changing the size, location, and layout of signature fields, as well as deleting signature fields from the document.

You can optionally create a chronological dependency between signatures in a document. In *Independent mode*, the order of signing is not important. In *Dependent mode*, an attempt to re-sign a signature invalidates all the digital signatures created after that signature.

CoSign supports two types of signatures: content-based signatures, which sign the textual and other visible content of a document, and file-based signatures, which sign the entire file. In

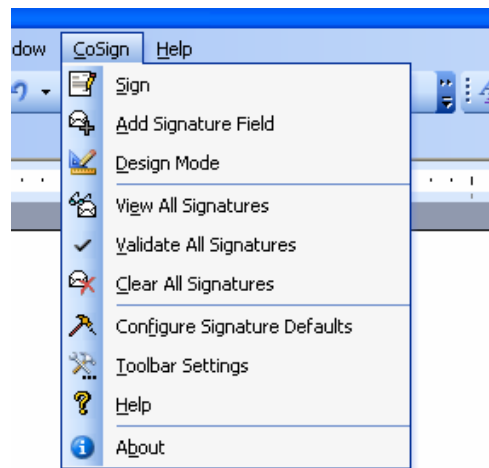
Word, both signature types are supported. In Excel, only content-based signatures are supported.

The following sections describe the ARX Legacy Word Add-in pull-down menu and toolbar, followed by a detailed step-by-step explanation of the signing process, including sections with detailed explanations of the various options and dialog boxes.

It is also possible to use the ARX Legacy Word Add-in in Office 2007 upon Word 2003 documents. To do so, activate the **Add-Ins** tab in Word 2007. Both the ARX Legacy Word Add-in pull-down menu and its toolbar will appear.

## ARX Legacy Word Add-in Pull-down Menu

As of CoSign version 4.1, the ARX Legacy Word Add-in plug-in includes a pull-down **CoSign** menu that can be activated from the menu bar of the Office application.












The **CoSign** menu includes the following options:

Menu Option	Description
<b>Sign</b>	All-in-one signature operation. Generates a new empty digital signature field at the cursor location, and performs a signature operation upon this newly generated field.
<b>Add Signature Field</b>	Inserts a new empty digital signature field at the cursor location. The field displays the text: "CoSign Digital Signature".
<b>Design Mode</b>	Toggles in and out of Design mode. For more information refer to <a href="#">Using Design Mode</a> .
<b>View All Signatures</b>	Displays signatures attached to the document. For more information refer to <a href="#">Signatures List</a> .
<b>Validate All Signatures</b>	Checks the validity of all existing digital signatures, and updates the images of the signatures according to their validity status.

Menu Option	Description
<b>Clear All Signatures</b>	Removes all digital signatures but keeps the digital signature fields.
<b>Configure Signature Defaults</b>	For more information refer to <a href="#">Signature Default Settings – General Parameters</a> .
<b>Toolbar Settings</b>	Configures which buttons are displayed in the ARX Office toolbar. Refer to <a href="#">Configuring the ARX Legacy Word Add-in Toolbar</a> .
<b>Help</b>	Displays this chapter in on-line Help format.
<b>About</b>	Displays version information about the ARX Legacy Word Add-in, and a link to the ARX Web site.

### ARX Legacy Word Add-in Toolbar Options

ARX Legacy Word Add-in includes a Digital Signatures toolbar with the following buttons:

Button	Task
	Toggles in and out of Design mode. For more information refer to <a href="#">Using Design Mode</a> .
	All-in-one signature operation. Generates a new empty digital signature field in the cursor location and also performs a signature operation upon this newly generated field.
	Inserts a new empty digital signature field at the cursor location. The field displays the text: “CoSign Digital Signature”.
	Displays signatures attached to the document. For more information refer to <a href="#">Signatures List</a> .
	Validate All signatures. Checks the validity of all existing digital signatures, and updates the images of the signatures according to their validity status.
	Clear All signatures. Removes all digital signatures but keeps the digital signature fields.
	Configure Signature Defaults. For more information refer to <a href="#">Signature Default Settings – General Parameters</a> .
	ARX Legacy Word Add-in Help. Displays this chapter in on-line Help format.
	Displays version information about the ARX Legacy Word Add-in, and a link to the ARX Web site.

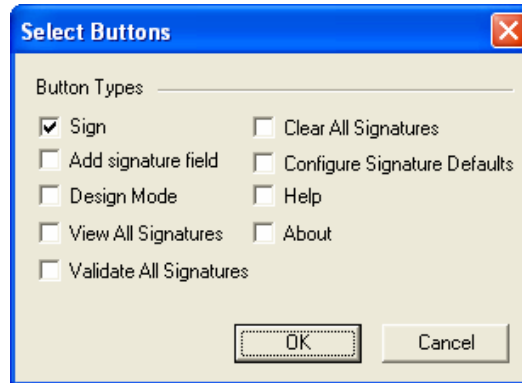
### Configuring the ARX Legacy Word Add-in Toolbar

You can specify which buttons appear in the ARX Legacy Word Add-in toolbar.

### To specify which buttons appear in the toolbar:

1. Select **Toolbar Settings** from the **CoSign** pull-down menu.

The *Select Buttons* dialog box appears.



*Figure 31 Select Buttons Dialog Box*

2. Check the boxes corresponding to the toolbar buttons you wish to display.
3. Click **OK**.

## Adding and Validating Graphical Signatures in Word and Excel Documents

The following sections describe the basic signing process, which includes the following phases:

- ◆ Signing a document (refer to [Signing a Document with a Graphical Signature](#)).
- ◆ Viewing signatures (refer to [Viewing Graphical Digital Signatures](#)).
- ◆ Validating signatures (refer to [Validating Signatures](#)).


In addition, if you modify the document after signing it:

- ◆ Modifying a signed document (refer to [Modifying Documents Containing Graphical Signatures](#)).




### *Signing a Document with a Graphical Signature*

To sign a Word or Excel document digitally, place digital signature fields in the desired locations, and sign each field.



#### To place digital signature fields:


1. Open the document you wish to sign.
2. Position the cursor where you wish a signature to appear, and click .

A digital signature field is created. The field displays the text “CoSign Digital Signature”.

 **Note:** To change the field's size, location, or layout, switch to Design mode by clicking  in the toolbar. When you finish modifying the field, click  again to toggle out of Design mode since you cannot sign a document in Design mode.

3. Repeat step 2 for every signature field you wish to create.

 **Note:** You can click  to generate a digital signature field and automatically perform a digital signature operation.


 **Note:** If you are signing an entire Word document using either a file-based or a content-based signature, keep in mind that after the first signature is generated, it is not possible to add new digital signature fields to the document. Therefore make sure to first create all the desired digital signature fields before you begin the process of signing them.


#### To sign each signature field:


1. Right-click the signature field and select **Sign** from the pop-up menu.
2. If the Reason option was configured, the *Select Reason* dialog box appears. Enter or select a reason and click **OK**.

For instructions on configuring the Reason option, refer to [Signature Default Settings – General Parameters](#). For explanations on entering a reason, refer to [Signature Default Settings – Signature Policy](#).

3. If you have several certificates in CoSign, you are prompted to select the desired certificate.  
If you have a single certificate, it is automatically selected.
4. If the graphical image was configured and you have several graphical images in CoSign, you are prompted to select the desired graphical image  
If you have a single graphical image and that graphical image should be included in the digital signature, you are not prompted to select the desired graphical image, and the graphical image is displayed at the end of the signature operation.

 **Note:** In Word, when using file based signatures, if you are working with a new document, you are prompted to save it during the digital signature operation.

 **Note:** When you send a document to Print, all the signatures are automatically validated so that the printout will display the updated state of the signatures.

 **Note:** When using the ARX Legacy Add-in in Office 2007, you cannot use a Legacy formatted digital signature in a .docx formatted document. An error message pops up if you try to do so.

#### Clearing or Deleting Digital Signatures


You may wish to delete signature fields or clear the digital signatures inside them.

**To clear a digital signature from a digital signature field:**

1. Right-click the field, and select **Clear** from the pop-up menu.

The digital signature is deleted from the field. The field itself remains intact.




**To delete a digital signature field:**

1. Switch to Design mode by clicking  in the toolbar.
2. Select the field and click **Delete** from your keyboard.

The digital signature field is deleted from the document.

**Viewing Graphical Digital Signatures**

Each graphical signature is displayed in the document along with one of the following validation symbols:

- ◆  – Signature is validated.
- ◆  – Signature is not validated.
- ◆  – Signature needs to be validated, or is in an unknown state.

If the signer has registered a graphical signature inside CoSign and configured it to display a graphical signature (refer to [Signature Default Settings – General Parameters](#)), the graphical signature is displayed on top of the validation symbol.



*Figure 32 Graphical Signature*

If the signer has not registered a graphical signature, the name of the user is displayed on top of the validation symbol.



*Figure 33 Digital Signature without Graphical Signature*

If the following elements were selected in the *Signature Default Settings* dialog box, they will also appear in the signature field (refer to [Signature Default Settings – General Parameters](#)).

- ◆ The signer's common name.
- ◆ The date and time of the signature operation.
- ◆ The reason for the signature.





*Figure 34 Signature with Additional Details*

## *Validating Signatures*

### **To validate a graphical signature attached to a document:**

1. Open the document.
2. Right-click the signature and select **Validate** from the pop-up menu.

Starting from version 4.1, you can configure the ARX Office plug-in to perform an automatic validation of all digital signatures that exist inside the document. Refer to [Setting Microsoft Office Configuration](#).

For information on how to view the signatures' status, refer to [Signatures List](#).

## *Modifying Documents Containing Graphical Signatures*

Modifying the signed data in a Word or Excel document invalidates all its relevant signatures (depending on the signature scope) and an **✗** is displayed in each signature field. Refer to [Word Specific Signing Features](#) and [Excel Specific Signing Features](#) for more details about the different signing options in Word and Excel, which define the scope of the digital signature.


If you attempt to save a file based signed Word document that is modified, the following message appears, **“Saving will remove all digital signatures in the document. Do you want to continue?”** To delete the file based signatures and save the document, click **Yes**.

## **Word Specific Signing Features**

Starting from version 3.4, the CoSign Client enables generating two new content-based types of signatures in Word documents, in addition to the file-based signature:

- ◆ **Document content signature** – This is the new default signature. This signature signs the entire textual and visible content of the document, but not the entire file. This mode is recommended in document management systems to avoid file access or network access to the document file.
- ◆ **Section based signature** – Signs only the content of a specific section in the document. This functionality is useful for Word documents that are based on workflow operations. Using section based signatures, each signer edits and signs a specific section, in no way affecting the signatures on other sections.

For backward compatibility, the file-based signature can also be used.


 **Note:** *Currently, SAPI (CoSign's signature API) supports only file-based signature operations upon a given Word file.*

## Excel Specific Signing Features


In Excel, only content-based signatures are supported. File-based signatures are not supported. You can select both the scope (workbook, active sheet, or selected area), and the content within the scope that will be signed.

The different scopes include:

- ◆ **Active sheet** – All the relevant content in the active sheet will be signed. Any change in the relevant content within the active sheet will invalidate the signature, while any change in other sheets will have no effect on the signature. This is the default value.
- ◆ **Workbook** – All the relevant content in all the workbook's sheets will be signed. Any change in the relevant content within any sheet of the workbook will invalidate the signature.
- ◆ **Selection** – Only the relevant content in the cells of the selected area will be signed. Any change in the relevant content of any of the selected cells will invalidate the signature, while any change in other cells will have no effect on the signature. You must select the cells before signing the signature field, and you can only sign a single continuous selection, not multiple selections.


 **Note:** *To view which selected area a specific signature applies to, right-click the signature field and select **Show** from the pop-up menu. The signed cells are highlighted.*

The different values for the signature content include:

- ◆ **Cell Values** – The values of the cells will be signed.
- ◆ **Cell Formula** – The cell formula will be signed.
  -  **Note:** *If the cell formula depends on other unsigned cells, then even if the values of those cells change and cause the selected cells value to change, as long as the formula remains the same, this change does not invalidate the signature.*
- ◆ **Cell Properties** – The following cell properties will be signed: font name, font style (indication whether the text is bold or italic), font size, hide row, and hide column.

## Configuring Signature Defaults

The *Signature Default Settings* dialog box enables setting defaults for the appearance and other parameters of the graphical signatures.

 **Note:** *You can configure defaults using the CoSign Configuration Utility. Refer to [Setting Microsoft Office Configuration](#).*

You can set general defaults for all signatures in a document, or configure a specific signature field.

**To configure signature defaults for all signatures in a document:**

- ◆ From the Digital Signatures toolbar, click .



**Note:** *The new signature defaults only affect future signature fields, not existing ones.*

**To configure a specific signature field:**



**Note:** *You can configure a specific signature field only if the field is empty.*

- ◆ Right-click a signature and select **Settings** from the pop-up menu.

The *Signature Default Settings* dialog box includes the following tabs:

- ◆ **Settings** – Enables setting general signature parameters. Refer to [Signature Default Settings – General Parameters](#).
- ◆ **Time Format** – Enables setting date and time parameters. Refer to [Signature Default Settings – Date and Time Format](#).
- ◆ **Scope of Signature** – Enables setting the different signing options for Word documents or Excel documents. Refer to [Signature Default Settings – Scope of Signature \(Word\)](#) and [Signature Default Settings – Scope of Signature \(Excel\)](#).
- ◆ **Signature Policy**– Enables defining Signature operation policy. At this stage, you can only define who can clear an existing signature. Refer to [Signature Default Settings – Signature Policy](#).



**Note:** *The **Microsoft Office Compatible Signature** field in the **Settings** tab is enabled only in Word.*

### Signature Default Settings – General Parameters

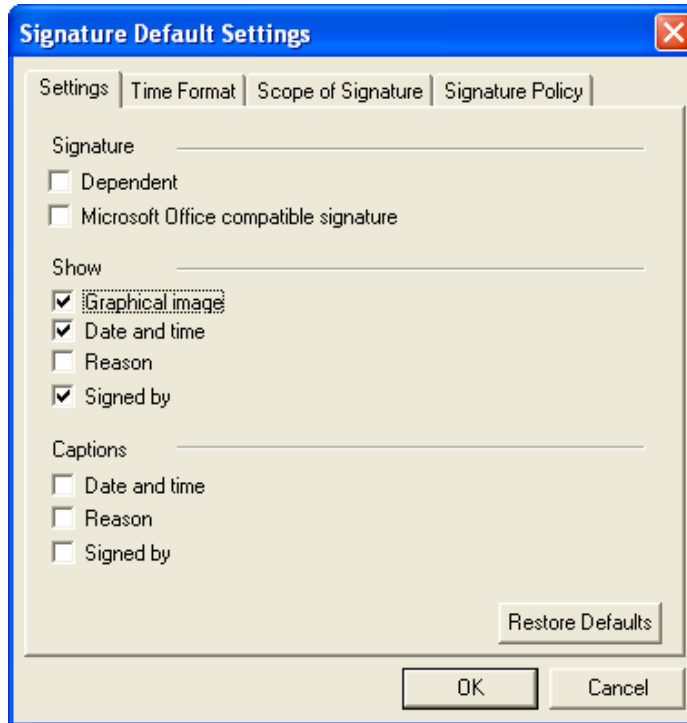


Figure 35 Signature Default Settings – Settings Tab


In the **Settings** tab you can set the following signature default settings:

#### ◆ Signature

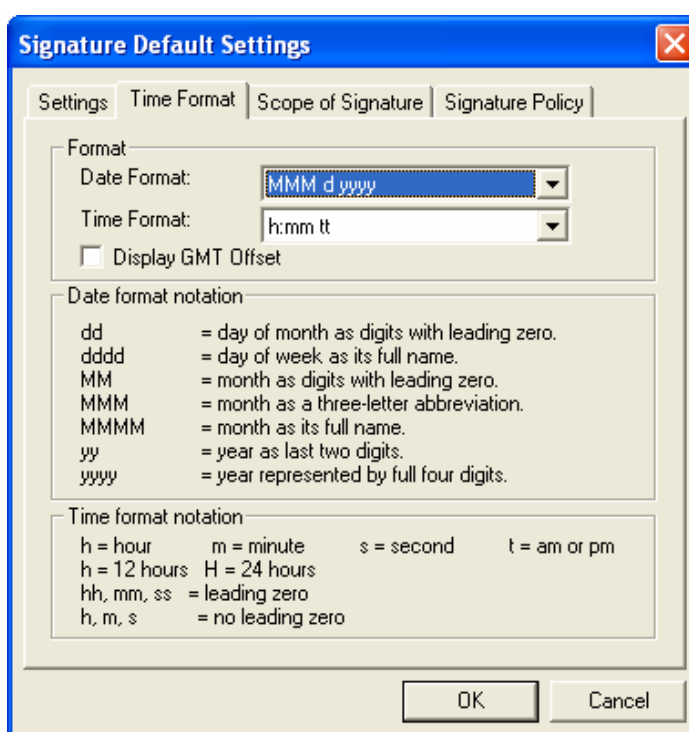
- ◆ **Dependent** – Specify whether the digital signature is dependent or independent. For more information on setting up dependent signatures, refer to [Imposing Dependency](#).
- ◆ **Microsoft Office compatible signature** – Relevant only to Word documents. If this option is set, the ARX Word add-in generates an XP compatible digital signature that can be validated in Word XP or Word 2003 without installing a plug-in. This option has differing functionality depending on the type of digital signature. If the digital signature is content-based then the ARX Word add-in generates an additional XP compatible signature. If it is a file-based digital signature, the generated digital signature is an XP compatible signature. Refer to [Validating Graphical Signatures in Word documents Without Using the ARX Legacy Word Add-in Plug-in](#).

When using Office 2007, keep in mind that there is a difference between signatures that are applied to .doc documents and signatures that are applied to .docx documents. This section is relevant only for .doc documents. In this case, the whole document is locked and therefore after performing such a signature, you cannot perform any modification to the document, including clearing the digital signatures.

- ◆ **Show** – Specify which elements will appear as part of the graphical image of the digital signature:

- ◆ **Graphical image** – Whether to display a graphical signature image.
- ◆ **Date and time** – Whether to display the date and time of the signature.
- ◆ **Reason** – Whether to display the reason for the signature.
- ◆ **Signed by** – Whether to display the signer’s name as listed in the signer’s certificate.
- ◆ **Captions** – Specify whether to display the title of the element, for the elements selected in the **Show** section.
- ◆ **Restore Defaults** – Specify whether to restore all the default values.  
This field is available only when clicking  to configure defaults for all signatures in the document.

### *Signature Default Settings – Date and Time Format*



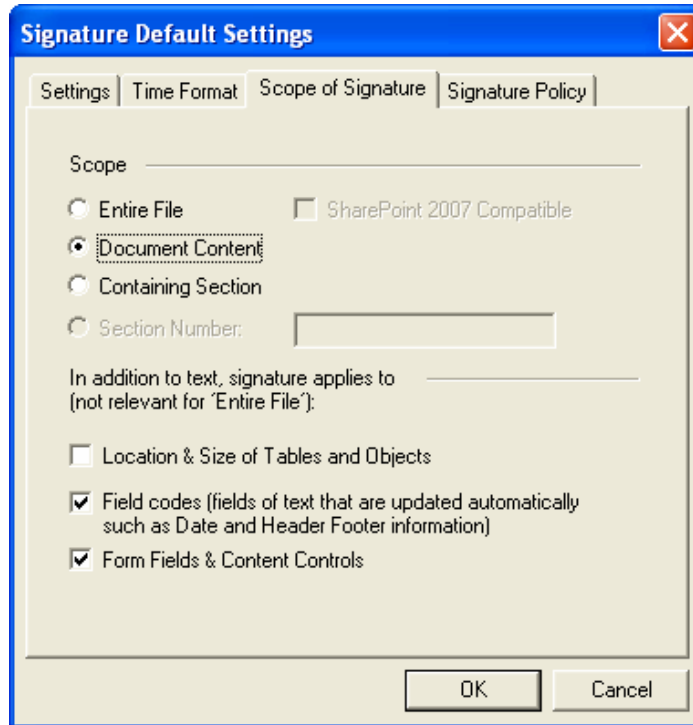
*Figure 36 Signature Default Settings – Time Format Tab*

In the **Time Format** tab you can set the following signature default settings:

- ◆ **Format** – Use the drop down lists to specify the desired *Date Format* and *Time Format*. The date and time format notation are explained in the dialog box.
- ◆ **Display GMT Offset** – Specify whether to display the time zone of the signature operation in relation to GMT.

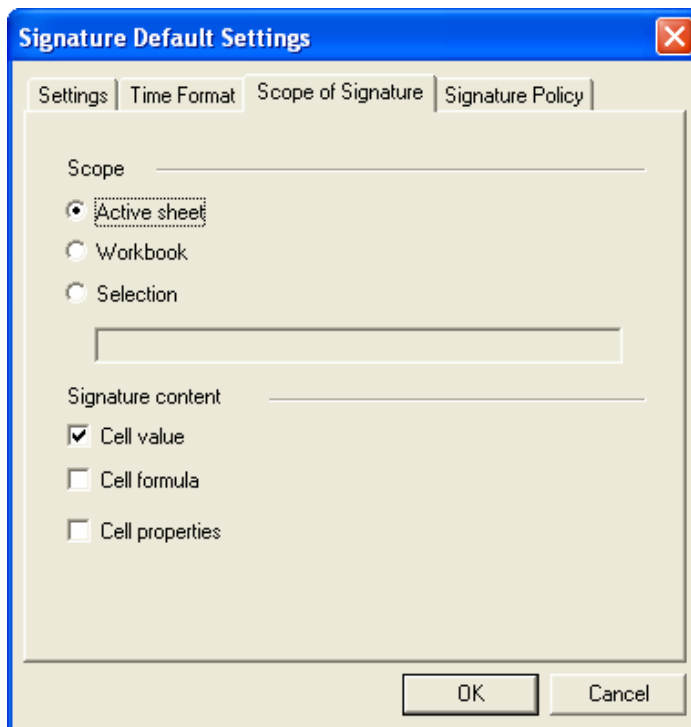


**Note:** *The signature time is taken from CoSign, while the time zone is taken from the local machine.*

*Signature Default Settings – Scope of Signature (Word)**Figure 37 Signature Default Settings – Scope of Signature Tab (Word)*

In the **Scope of Signature** tab that appears in Word you can set the following signature default settings:


- ◆ **Scope** – Specify the content to be signed:
  - ◆ **Entire File** – The Word file itself is signed. This mode was the only option prior to CoSign version 3.4.
  - ◆ **Document Content** – All the text and visible content of the document is signed.
  - ◆ **Containing Section** – The content of the current section is signed.
  - ◆ **Section Number** - The content of this section is signed.
- ◆ **In addition to text, signature applies to** – Enables specifying that additional information be signed in the case of a content-based signature.
  - ◆ **Location & Size of Tables and Objects** – The location and size of tables and objects within the scope of signature are also included in the digital signature. This may cause a signature validation failure if content changes.
  - ◆ **Field codes** – The signing process includes the result of dynamically changing fields (smart tags) inside the headers and footers. This may cause a signature validation failure if content changes.
  - ◆ **Form Fields & Content Controls** – The signing process includes form fields and content controls. This may cause a signature validation failure if content changes.

*Signature Default Settings – Scope of Signature (Excel)*

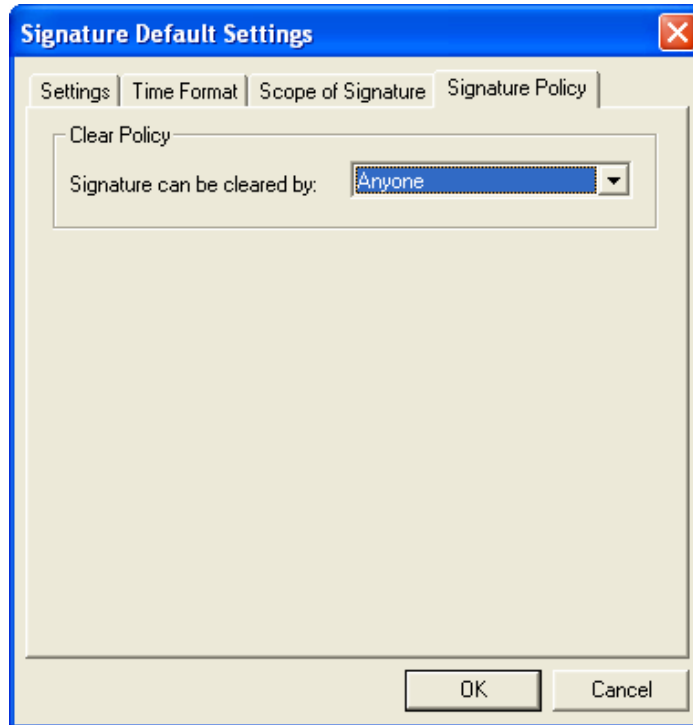
*Figure 38 Signature Default Settings – Scope of Signature Tab (Excel)*

In the **Scope of Signature** tab that appears in Excel you can set the following signature default settings:

- ◆ **Scope** – Specify the cells to be signed:
  - ◆ **Active sheet** – All the relevant content in the active sheet will be signed.
  - ◆ **Workbook** – All the cells in the workbook will be signed.
  - ◆ **Selection** – Only the cells of a specific selected area will be signed. There are two ways for specifying the selected area to be signed:
    - ◆ Specify the top left and the bottom right cells of the desired area, separated by a colon, in the **selection** field. See [Figure 38](#) for an example.  
In this case the signer merely right clicks and signs the signature field.
    - ◆ If no selection is specified in the **selection** field, the signer selects the cells to be signed and then right clicks and signs the signature field.
- ◆ **Signature content** – Specify the cells-related content to be signed:
  - ◆ **Cell value** – The cell values will be signed.
  - ◆ **Cell formula** – The cell formula will be signed.
  - ◆ **Cell properties** – The following cell properties will be signed: font name, font style (indication whether the text is bold or italic), font size, hide row, and hide column.

 **Note:** You must set either **Cell Values** or **Cell Formula** or both.

### *Signature Default Settings – Signature Policy*



*Figure 39 Signature Default Settings – Signature Policy Tab*

In the **Signature Policy** tab you can set the following signature default settings:

- ◆ **Clear Policy** – Specify the policy for clearing an existing signature field:
  - ◆ **Anyone** – Anyone can clear the signature field.
  - ◆ **No One** – No one can clear the signature field.
  - ◆ **Signer only** – Only the signer can clear the signature field.

### Selecting a Reason

The **Select Reason** option enables you to obligate a signer to enter the reason for the signature.

The *Select Reason* dialog box appears during the digital signature process if the **Reason** option is selected in the *Signature Default Settings* dialog box (refer to [Signature Default Settings – General Parameters](#)).



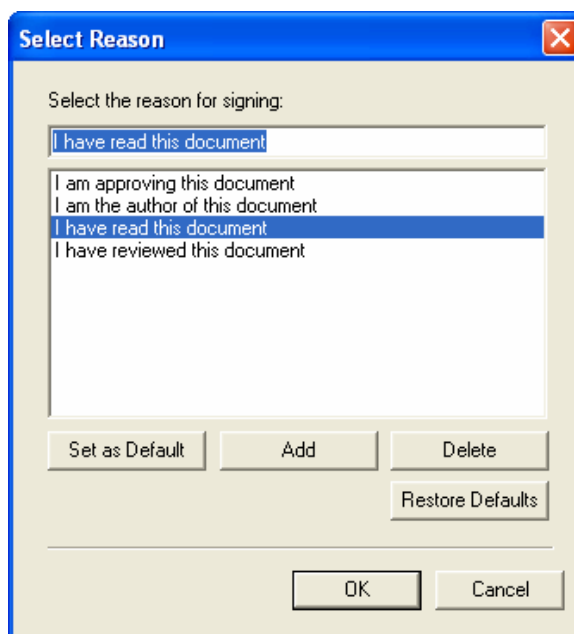


Figure 40 Select Reason Dialog Box

**To specify the reason for signing:**

1. Enter the text of the reason for signing in the **Select the reason for signing** field.

OR

Select a reason from the list of predefined reasons. On selection, the text appears in the **Select the reason for signing** field.

2. Click **OK**.

You can also edit the list of predefined reasons using the following buttons:

- ◆ **Set as Default** – The currently selected item in the list of predefined reasons becomes the default reason. This reason is displayed on all subsequent appearances of the *Select Reason* dialog box.
- ◆ **Add** – The current text in the **Select the reason for signing** field is appended to the list of predefined reasons.
- ◆ **Delete** – The currently selected item in the list of predefined reasons is removed from the list.
- ◆ **Restore Defaults** – Restore the list of reasons as listed in the CoSign Configuration utility in the [Microsoft Office – Reasons](#) section



**Note:** Clicking **Cancel** cancels the digital signature operation.

## Imposing Dependency

You can use the Dependent Signatures option to impose a chronological hierarchy of signatures. For example, when you wish to ensure that a document will be signed first by the document's author, then by the author's superior, and then by the regional manager.


### To impose dependency in the digital signature process:

1. From the Digital Signatures toolbar, click .

The Signature Default Settings dialog box appears.

2. In the **Settings** tab, select **Dependent** signature type (refer to [Signature Default Settings – General Parameters](#)).

All signature fields you place in this document are fields for dependent signatures, and the order of the signing dictates the hierarchy of the signatures. For example, in a document with four signatures, an attempt to re-sign the first signature will invalidate the second, third, and fourth signatures; an attempt to re-sign the second signature will invalidate the third and fourth signatures; while an attempt to re-sign the last signature will not invalidate any signature.

3. Position the cursor where you wish the first signer to sign, and click  to insert a signature field.
4. Continue inserting as many signature fields as desired, taking care to place the second field where you wish the second signer to sign, the third field where you wish the third signer to sign, etc.

A document with dependent signatures should typically contain text within the document that details the correct order of signing, and directs the signers to their respective signature fields.

### *Dependency in Excel*


Dependency in Excel is based on the type of signature, as follows:

- ◆ Signatures based on an active sheet are dependent only on signatures inside the active sheet and not in other sheets.
- ◆ Signatures based on a workspace can be dependent on signatures in other sheets in the same workspace.
- ◆ Dependency cannot be enforced on signatures that are based on a selected area.

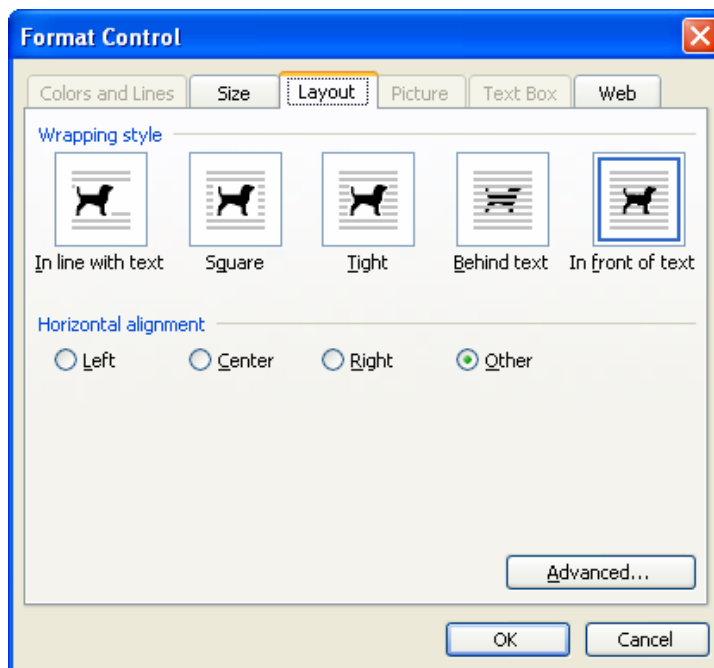
## Using Design Mode

Design mode enables you to change the size, location, and layout of the signature field, as well as delete a signature field.

### To use Design mode:

1. Click  in the toolbar to switch to Design mode.

2. Perform any of the following, as desired:
  - ◆ Modify the field's location – Select the signature field and move or resize the field.
  - ◆ Modify the field's object's format:
    - ◆ In Word, you can change the field's size and layout. Right-click the signature field and select **Format Control** from the pop-up menu. The *Format Control* dialog box appears.

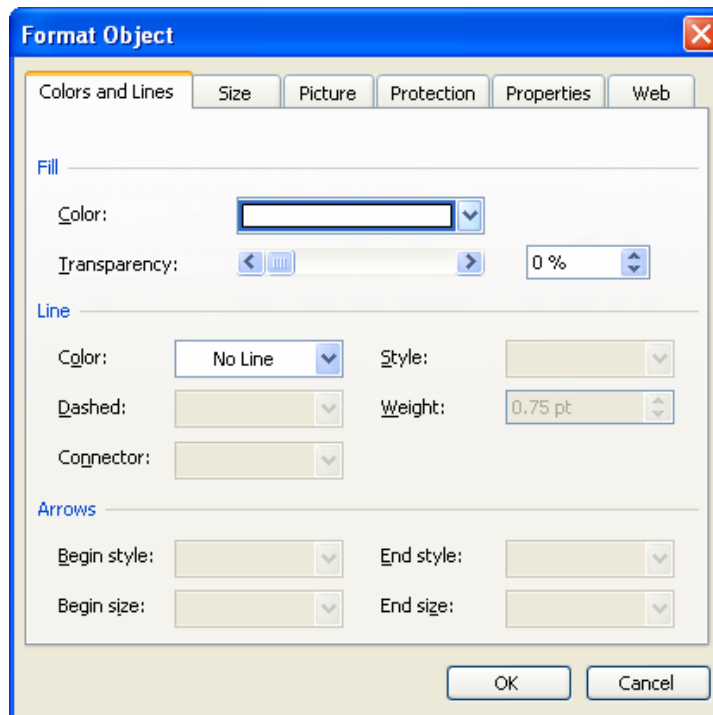


*Figure 41 Word's Signature Field Format Control Dialog Box*

Use the **Layout** tab to specify the layout settings of the signature field.

Use the **Size** tab to specify the size settings of the signature field.

- ◆ In Excel, you can change the field's colors and lines, size, and properties. Right-click the signature field and select **Format Object** from the pop-up menu. The *Format Object* dialog box appears.




*Figure 42 Excel's Signature Field Format Object Dialog Box*

Use the **Colors and Lines** tab to specify the color and line settings of the signature field.

Use the **Size** tab to specify the size settings of the signature field.

Use the **Properties** tab to specify the positioning and printing options of the signature field.

- ◆ Delete the signature field – Select the field and press Delete on your keyboard.
3. When you finish modifying the signature field, click  again to toggle out of Design mode.

## Signatures List

In the *Digital Signatures* dialog box you can view the list of all actual signatures in a document. If the signatures are dependent, you can view the dependent signatures of a given signature.



*Figure 43 Digital Signatures Dialog Box*

### To view the list of all signatures:


1. From the Digital Signatures toolbar, click .

The *Digital Signatures* dialog box appears, showing all actual signatures (not signature fields) in the document.




### To view dependent signatures:

- ◆ Right-click a dependent signature and select **Dependencies** from the pop-up menu.

The *Digital Signatures* dialog box appears, showing all the signatures on which the specified signature depends.

 **Note:** In Excel, signatures that apply to a selected area never depend on other signatures. Therefore choosing the **Dependencies** option for such signature fields will show no signatures in the *Digital Signatures* dialog box.

The icon to the left of the signer's name indicates the signature's status, as follows:

Icon	Task
	Both the signature and certificate are valid.
	A minor problem is detected (for example, the ROOT certificate is not installed on this machine and therefore the certificate cannot be validated).
	A major problem is detected (for example, the document was tampered with after signing).

To view additional information about the signatures and certificates, refer to [Signature Details](#).

### Signature Details

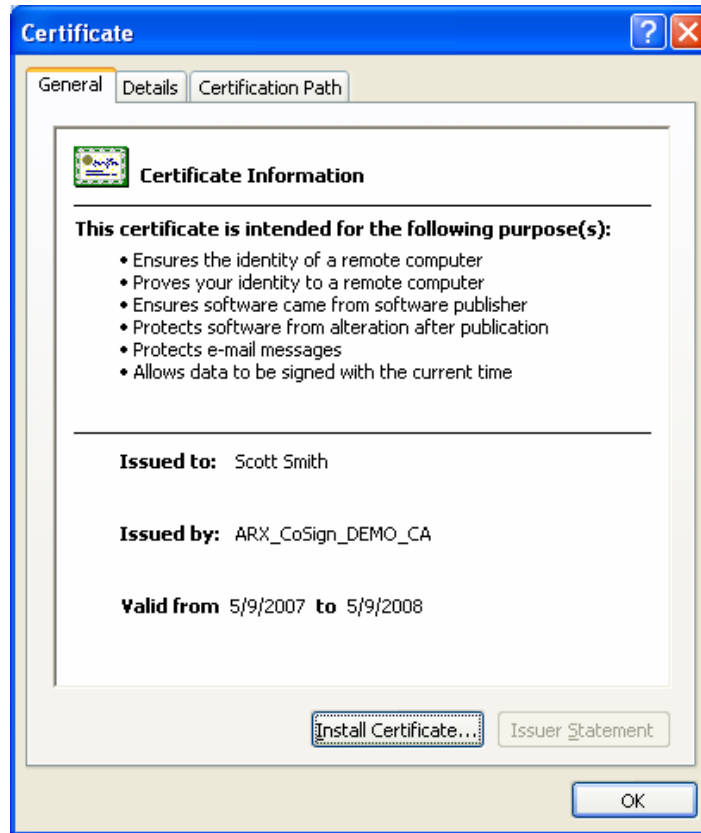
To view additional information about the signatures and certificates:

1. Open the *Signature Details* dialog box in one of the following ways:
  - ◆ Select a signature in the *Digital Signatures* dialog box and click **Details**. The *Signature Details* dialog box appears.
  - ◆ Right-click a signature field within the document and select **Details** from the pop-up menu. The *Signature Details* dialog box appears.



Figure 44 Signature Details Dialog Box

2. To view certificate information, click **View Certificate**. The *Certificate* dialog box appears.



*Figure 45 Certificate Dialog Box*

The *Certificate* dialog box includes the following tabs:

- ◆ **General** – Provides general certificate information, including the intended use of the certificate, to whom the certificate was issued, the certificate issuer, and the certificate's expiration date.
- ◆ **Details** – Provides additional details about the certificate.
- ◆ **Certification Path** – Provides information about the certificates at a higher hierarchical level in the chain that approve the current certificate.

## Validating Office Graphical Signatures


The following sections describe how a user who is not using CoSign can validate graphical signatures that were attached using CoSign.


### ***Validating Graphical Signatures Using the ARX Legacy Word Add-in Plug-in***

If you are not using CoSign, you may still validate graphical signatures that were attached using CoSign. This is useful if you receive documents from a company or organization that uses CoSign internally.

#### **To validate signatures:**

1. Obtain the following from a reliable representative of the organization using CoSign:
  - ◆ A copy of *ARX's Office Verifier* that includes the ARX digital signature plug-in for Word and Excel. This copy can be installed using the web-based ARX verifier software.
  - ◆ The organization's ROOT CA Certificate (.cer file).


 **Note:** For instructions on how to install the ROOT certificate to a .cer file, refer to [Installing the ROOT Certificate](#).
2. Install the ARX Office Verifier from the ARX web site or from the organization that has an installed CoSign appliance (refer to [Installing the CoSign Verifier](#)).
3. Install the organization's ROOT CA Certificate (refer to [Installing the ROOT Certificate](#)). Alternatively, install the organization's ROOT CA Certificate using the web-based ARX verifier software.

 **Note:** If an external CA is used, or the CoSign certificate is based on a WorldWide verifiable CA, there is no need to install the ROOT certificate.
4. Validate the signature (refer to [Validating Signatures](#)).

### ***Validating Graphical Signatures in Word documents Without Using the ARX Legacy Word Add-in Plug-in***

If you do not wish to install CoSign nor the ARX Legacy Word Add-in, you can still view the graphical signature that was attached using CoSign and validate it, without installing ARX Legacy Word Add-in. This is useful if you receive documents from a company or organization that uses CoSign internally.

This operation is only applicable for Word XP, Word 2003, and Word 2007, in cases where there is a single graphical signature inside the document.

-  **Note:** Although the graphical signature can be viewed, the right-click pop-up menu is not available. It is available only when the ARX Legacy Word Add-in plug-in is installed.



To validate a digital signature without using CoSign, refer to [Viewing and Validating Signatures without Graphical Images in Word and Excel XP/2003](#).

## Signing Word and Excel XP/2003 Documents without Graphical Signatures

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Word and Excel XP/2003 support digital signatures, enabling seamless integration with CoSign. Only the ARX CoSign client needs to be installed and no additional plug-ins are required to digitally sign or validate a signature in a document. For information on installing this component, refer to [Installing the CoSign Client](#).

### Signing a Word or Excel XP/2003 Document without a Graphical Signature

To sign a document in Word or Excel XP/2003 without a graphical signature:

1. Open the document you wish to sign in its associated application.
2. Open the **Tools** menu and select **Options**. The *Options* dialog box appears.
3. Select the **Security** tab and click **Digital Signatures**. The *Digital Signature* dialog box appears.

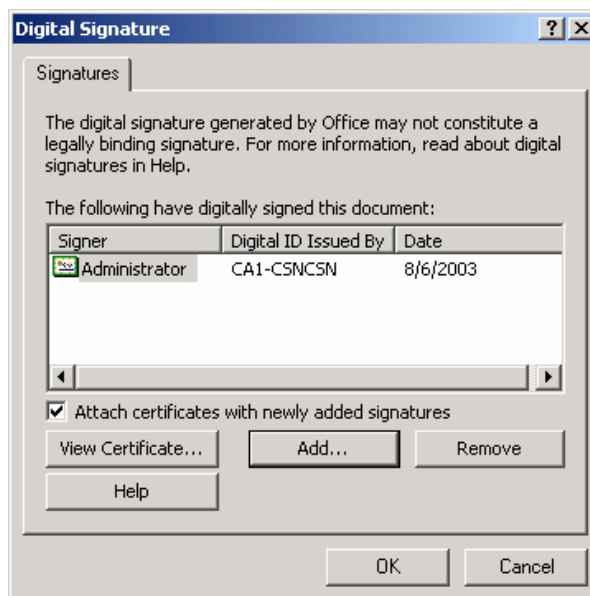



Figure 46 Digital Signature Dialog Box


4. Click **Add**. The *Select Certificate* dialog box appears, listing all your certificates.
5. Select the desired certificate and click **OK**. Your signature is appended to the list in the *Digital Signature* dialog box.
6. Click **OK**. The document is saved and your signature is attached to the document.

 **Note:** You can attach several digital signatures of different users to each Word or Excel XP/2003 document.

## Viewing and Validating Signatures without Graphical Images in Word and Excel XP/2003

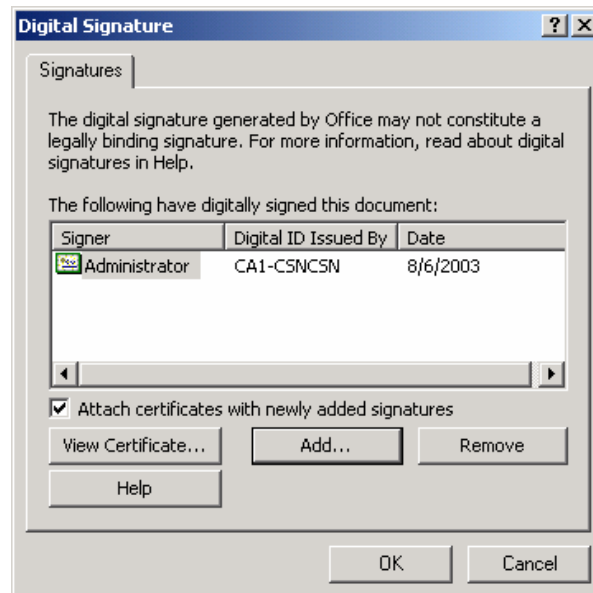
To view attached signatures that do not contain graphical images:

### In Word XP/2003:

1. Open the document in Word XP/2003.
2. In the status bar at the bottom of the window, double-click . The *Digital Signature* dialog box appears and all the valid certificates are displayed. If this icon is not visible, no signatures are attached to the document.



### In Excel and Word XP/2003:

1. Open the document in Word or Excel XP/2003.
2. Open the **Tools** menu and select **Options**. The *Options* dialog box appears.
3. Select the **Security** tab and click **Digital Signatures**. The *Digital Signature* dialog box appears and all the valid certificates are displayed.




*Figure 47 Digital Signature Dialog Box*

Office XP/2003 also checks whether the certificate exists in a Certificate Revocation List (CRL). If the certificate exists in a CRL, you receive a validation error.

-  **Note:** *If the document has been tampered with, you cannot view its certificate. In Excel there is no indication at all that the file was ever signed.*
-  **Note:** *In Excel XP/2003, the window title of a signed document indicates that the document was signed, but the status bar at the bottom of the window does not display the validation status of the signature.*

**To validate signatures:**

1. Obtain the ROOT CA Certificate (.cer file) from a reliable representative of the organization using CoSign.
2. Install the organization's ROOT CA Certificate (refer to [Installing the ROOT Certificate](#)).

 **Note:** *If an external CA is used, or if the CoSign certificate is based on a WorldWide verifiable CA, there is no need to install the ROOT certificate.*


3. Click **View Certificate...** to view the certificate information and verify that its CRL and certificate chain are correct.

## Signing PowerPoint XP/2003 Documents

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CoSign enables you to add and validate signatures in both PowerPoint XP and PowerPoint 2003.

In PowerPoint XP/2003 documents, perform digital signature operations in the same manner as in Word/Excel XP/2003 documents (refer to [Signing Word and Excel XP/2003 Documents without Graphical Signatures](#)).


-  **Note:** *In PowerPoint XP/2003, the window title of a signed document indicates that the document was signed, but the status bar at the bottom of the window does not display the validation status of the signature. To validate a digital signature, click **View Certificate** in the Digital Signatures dialog box.*




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## Chapter 4: Signing InfoPath Forms

- ◆ CoSign enables generating and validating graphical digital signatures for Microsoft InfoPath forms, and integrating the graphical digital signatures into the general application flow.
- ◆ InfoPath itself supports multiple and sectional digital signatures. ARX's solution for InfoPath combines these features of InfoPath with the graphical image capabilities of CoSign, to create a complete solution that enables you to design a form with as many signatures as desired. Each signature can cover any portion of the form, and most importantly, the signature is visible and is treated like any other field in the form.
- ◆ The integration of the graphical signature is performed in the form's template, as explained in detail in this chapter.

 **Note:** *All the screen captures in this chapter were made using the ABSNCREQ template sample (ABSNCREQ.xsn) that is included in the InfoPath installation.*


 **Note:** *In this chapter it is assumed the reader has a working knowledge of InfoPath forms.*

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### Prerequisites for Signing an InfoPath Form

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CoSign enables you to add graphical signatures to InfoPath forms in Office 2003/2007. To enable graphical and digital signatures, you must install the ARX CoSign Client and MS Office client components. For information on installing these components, refer to [Installing the CoSign Client](#).

 **Note:** *Since ARX's solution for InfoPath does not require any plug-in installation, you can install Office 2003 after the CoSign components are already installed.*

Digital signatures are supported in InfoPath starting from Service Pack 1 for Office 2003 and in Office 2007. Therefore, verify that service pack 1 or later is installed prior to performing any digital signature related operations on InfoPath forms, and prior to running the ARX InfoPath Designer. In addition, when opening a template that was created before Service Pack 1 was installed, click **Yes** when InfoPath asks you whether to add the Service Pack features ([Figure 48](#)).

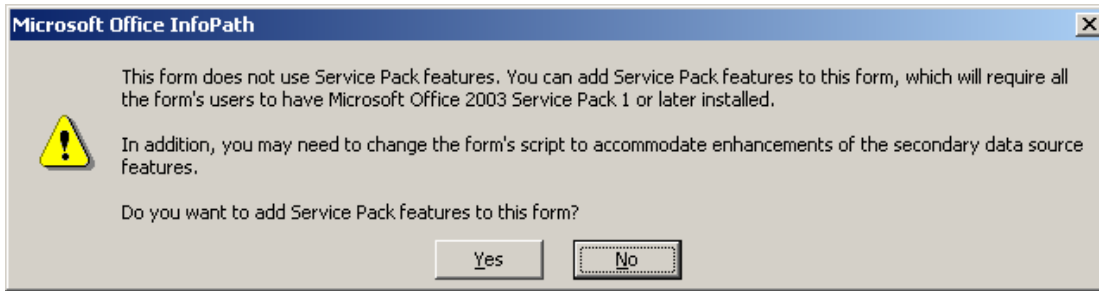



Figure 48 Adding Service Pack Features

## Graphically Signing an InfoPath Form

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The graphical signing operation on an InfoPath form is composed of three phases:

1. [Adding a Graphical Signature Object](#) in Design mode – in this phase, the designer adds one or more graphical signature data objects to the Data Source structure, places the object(s) (signature graphical image, signature time, or both) in the actual form, and defines the signable data and the signed areas.
2. [Adding the CoSign Digital Signatures Toolbar](#) to the template by running **ARX InfoPath Designer** from the **Start** menu.
3. [Signing an InfoPath Form with a Graphical Signature](#) – signing any of the signatures in the form by the end user, and embedding both the graphical and the digital signatures in the form.

 **Note:** *If a view is added to a template after running ARX InfoPath Designer, you must run ARX InfoPath Designer again.*

Based on InfoPath's built-in support of digital signatures, ARX's solution also supports multiple, sectional, and dependent signatures without adding any special and proprietary menu options or GUI but by using InfoPath's standard user interface.

The following sections provide a detailed step-by-step explanation of the signing process.

### Adding a Graphical Signature Object

Adding a graphical signature object to an InfoPath form template is performed during form's layout and data design phase. It includes the following tasks:

1. [Configuring the Template with the Domain Security Level.](#)
2. [Adding the Graphical Signature Object to the Data Source.](#)
3. [Placing the Graphical Signature Object on the Form Layout.](#)
4. [Defining Sets of Signable Data.](#)

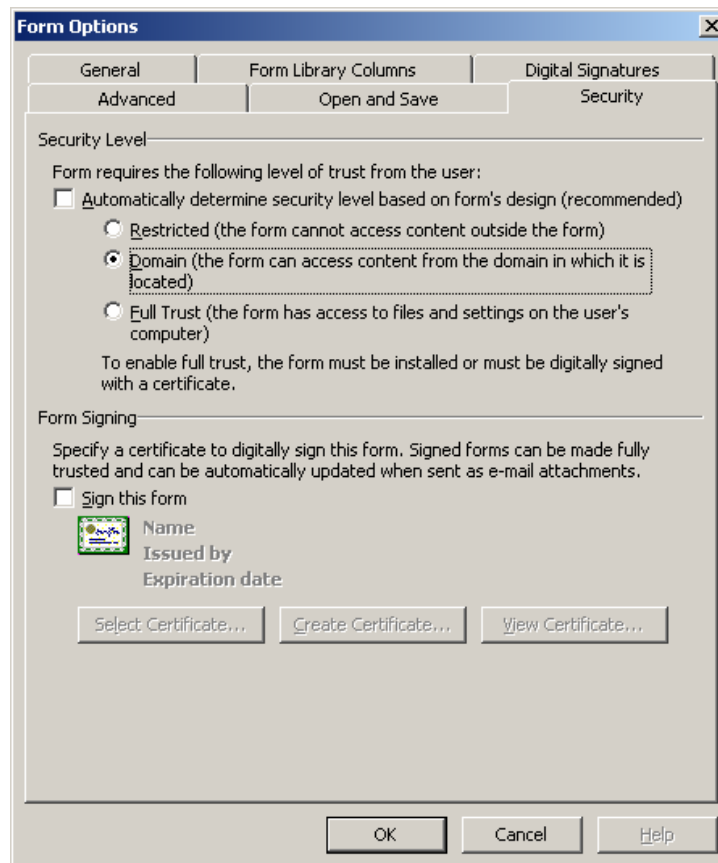
5. [Creating Multiple Signatures in a Form](#) (optional).

### **Configuring the Template with the Domain Security Level**

Configure the template you are designing with the *Domain* security level.

**To set the security level of the form:**

1. Select **Tools > Form Options**. The Form Options dialog box appears.
2. Select the **Security** tab ([Figure 49](#)).



**Figure 49 Security Tab**

3. Select **Domain** in the **Security Level** section.
4. Click **OK**.


### *Adding the Graphical Signature Object to the Data Source*

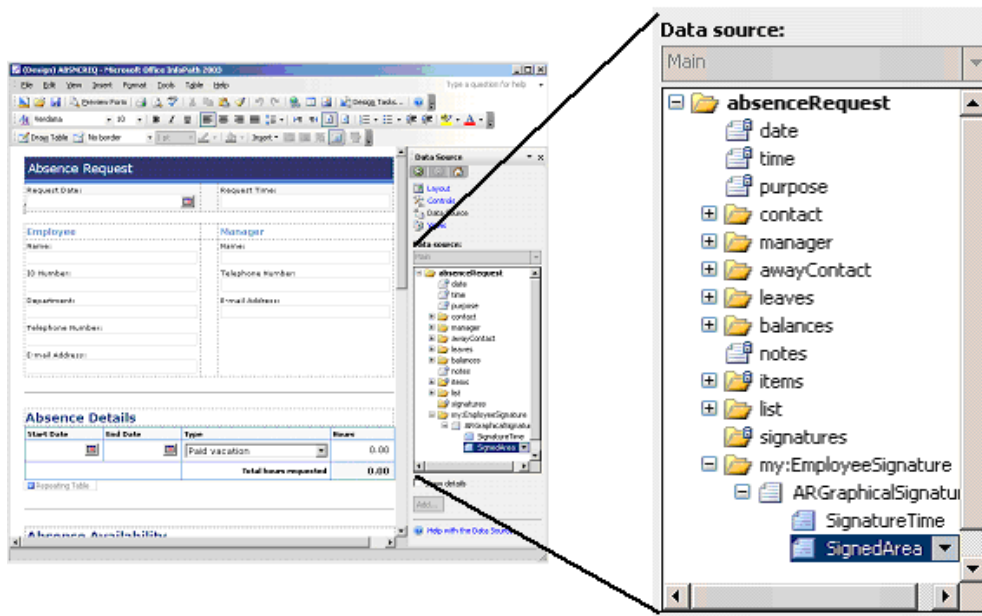
The ARGraphicalSignature object is defined in the Data Source as a group that consists of one signature image field and two field attributes – signature time (the time of the signing operation) and signed area (the index of the area to which this signature image belongs).

#### **To create the graphical signature data object:**

1. Open a form in Design mode. If **Data Source** is not visible in the task pane, select **Data Source...** from the **View** menu. See [Figure 50](#).
2. Add a new group where desired in the **Data Source** structure and name it as desired. Make sure the **Repeating** box is unchecked.
3. Under the new group, add a field named **ARGraphicalSignature** of type *Field (element)* and of Data type *Picture or File Attachment (base64)*. Make sure the **Repeating** and **Cannot be blank** boxes are unchecked.
4. Under **ARGraphicalSignature**, add the following field attributes of data type *Text(string)*:
  - ◆ **SignatureTime**
  - ◆ **SignedArea** (for CoSign internal use)

The default value in both attributes should be left empty. Do not check the **Cannot be blank** box.

 **Note:** *The field and attribute names are case sensitive.*



*Figure 50 Data Source*





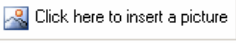
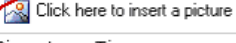
**Note:** Do not change the ARX Graphical Signature object structure. Adding groups or fields to this structure may cause unexpected behavior.

### ***Placing the Graphical Signature Object on the Form Layout***

After creating the ARX Graphical Signature object in the Data Source you must place it on the form layout, so that when the digital signature is created the graphical image will be displayed on the form. You can decide whether you want only the graphical image, or both the image and the signature time.


#### **To place the graphical signature object on the form layout:**

1. Place the signature image and signature time fields, using either of the following alternative methods (illustrated in [Figure 51](#)):
  - ◆ **Method A:** Drag the whole group from the Data Source window to the layout where you want it to be displayed.  
Select **Section with control** from the pop-up menu that displays when you release the mouse button. A new section containing three fields is created on the layout.  
Remove the **Signed area** field and its label since they are intended for internal CoSign use.  
Drag additional fields as desired.  
See for example the left side of [Figure 51](#).
  - ◆ **Method B:** Drag the ARGraphicalSignature field from the Data Source window to the layout where you want it to be displayed.  
Select **Picture** from the pop-up menu that displays when you release the mouse button.  
Then drag the **SignatureTime** field in the same manner.  
See for example the right side of [Figure 51](#).

Method A	Method B
<div style="border: 1px dashed gray; padding: 5px;"> <p><b>Employee</b></p> <p>Name: <input type="text"/></p> <p>ID Number: <input type="text"/></p> <p>Department: <input type="text"/></p> <p>Telephone Number: <input type="text"/></p> <p>E-mail Address: <input type="text"/></p> <p>Signature Time: <input type="text"/></p> <p></p> <p>Section <input type="text"/></p> </div>	<div style="border: 1px dashed gray; padding: 5px;"> <p><b>Employee</b></p> <p>Name: <input type="text"/></p> <p>ID Number: <input type="text"/></p> <p>Department: <input type="text"/></p> <p>Telephone Number: <input type="text"/></p> <p>E-mail Address: <input type="text"/></p> <p></p> <p>Signature Time: <input type="text"/></p> </div>

*Figure 51 Methods of Placing the Graphical Signature Object on the Form Layout*

2. Set the signature image size.  
Set the graphical image size according to the size of the actual graphical image. You can do either of the following:
  - ◆ Right click the object and select **Picture Properties**. Click the **Size** tab and specify the optimal settings.
  - ◆ Leave the default **Auto** size. In this case, the size of the picture object is dynamically changed by the signing operation.

 **Note:** Make sure the time field is long enough to contain the selected time format. For more information about selecting the time format, refer to [Signature Default Settings – Date and Time Format](#).

### **Defining Sets of Signable Data**

When the graphical image is both defined in the Data Source and is located as desired on the form layout, the signable data (signed area) should be defined. This operation links a group of fields in the form to the standard InfoPath digital signature and its graphical representation.

The signed area can be either the entire form, or a selected area of the form.

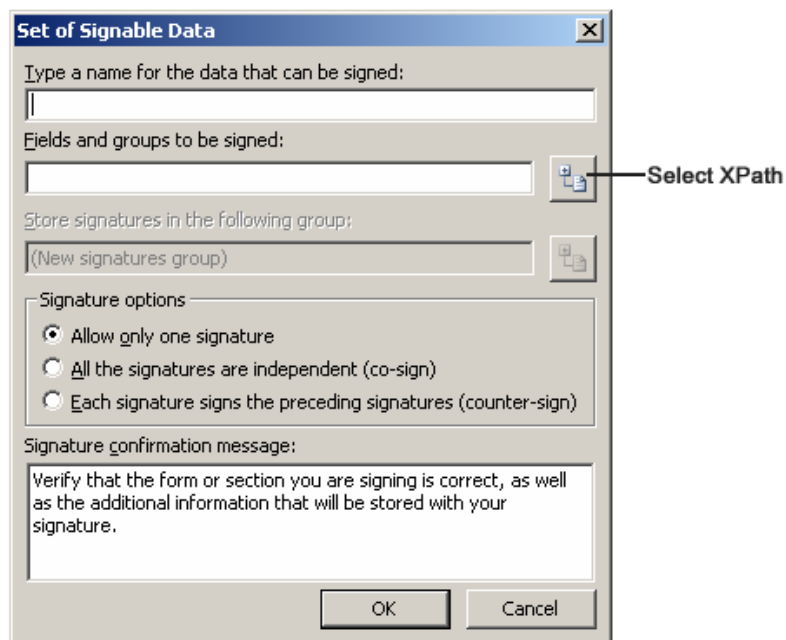
#### **To define the signature on the entire form:**

1. Select **Tools > Form Options**. The Form Options dialog box appears.
2. Select the **Digital Signatures** tab.


3. Select **enable digital signature for the entire form**, and click **OK**. Selecting this option automatically adds to the Data Source a new group named **signatures** of data type *DigitalSignaturesType* if this group doesn't already exist.

**To define the signature on a selected area of the form:**

1. Select **Tools > Form Options**. The Form Options dialog box appears.
2. Select the **Digital Signatures** tab.
3. Select **enable digital signature for specific data in the form**.
4. Click **Add** to add a new set of signable data. The Set of Signable Data dialog box appears ([Figure 52](#)).

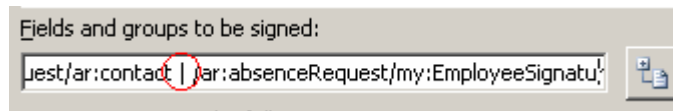


*Figure 52 Set of Signable Data Dialog Box*

5. Enter a name for the new set (or area). This name will show up again when you choose to sign the form and there is more than one area to sign on.
6. Specify which fields or groups you want the signature to cover. These objects will be locked after signing and any change in any of them will invalidate the signature.
  - ◆ To specify a single field/group, click the **Select XPath** button  and select a single object from the selection dialog box.
  - ◆ To specify multiple fields/groups, select each field/group and copy the resultant string from the **Fields and groups to be signed** text box into a text editor. When you have all the strings, copy them back to the text box with a '|' separating the individual strings (see [Figure 53](#)).



**Note:** You must also include the graphical signature group itself in the **fields and groups to be signed**, either directly by including it in the fields and groups list, or indirectly by having it included under one of the groups in the list.



*Figure 53 Strings Separated by ‘|’*

7. Select a signature option (see [Figure 52](#)), as follows:

- **Allow only one signature** – Only one signer can sign this area.
- **All the signatures are independent (co-signing)** – Multiple signers for this area are allowed, and the current signature does not sign on previously made signatures of this area. This means you can remove previous digital signatures anytime, without invalidating the current signature.
- **Each signature signs the preceding signature (counter-signing)** – Multiple signers for this area are allowed, and the current signature signs on previously made signatures of this area. This means that removing any of the previous digital signatures will invalidate the current one.



**Note:** If you select either of the last two options, both the digital and the graphical signatures are added to the form when the first signer signs this area. All subsequent signers of the same area cause addition of only their digital signature, while the ARX graphical image and ARX signature time remain unchanged.

8. Edit the Signature confirmation message if desired. This message is displayed to the signer when InfoPath shows the signer the form to be signed and asks for final approval. Refer to [Signing an InfoPath Form with a Graphical Signature](#) for more information.
9. Click **OK**.
10. Repeat steps 4 through 9 for every new set of signable data you wish to add.

### ***Creating Multiple Signatures in a Form***

There are two different scenarios where more than one signature needs to be placed in a single form.

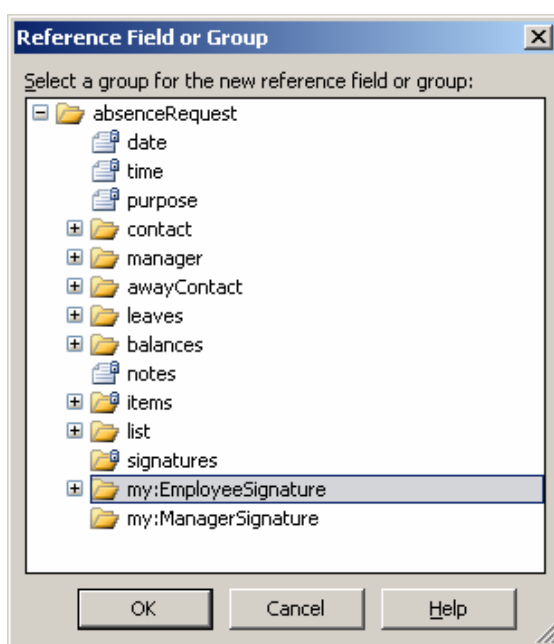
- ◆ [Creating Multiple Independent Signatures](#) – Several signers need to sign a section or the entire form, but the signatures do not depend on one another. For example, a list of employees’ signatures stating that each of them read a certain document.
- ◆ [Creating Multiple Dependent Signatures](#) – The signatures depend on one another, that is, if a signature is changed, then all subsequent signatures are invalidated. For example, a

manager who approves and signs a purchase order that was filled and signed by an employee.

### Creating Multiple Independent Signatures

To create multiple independent signatures:

1. Create the first signature object in the Data Source as described in [Adding the Graphical Signature Object to the Data Source](#).
2. Add a new group in the **Data Source** structure and name it as desired, making sure the **Repeating** box is not checked.
3. Right click the ARGraphicalSignature field and select **Reference**. The Reference Field or Group dialog pops up ([Figure 54](#)).



*Figure 54 Reference Field or Group*

4. Select the newly created Signature group and click OK. The ARGraphicalSignature field, including its SignatureTime and SignedArea attributes, are automatically added to the new Signature group.
5. Place both signatures on the form layout, as described in [Placing the Graphical Signature Object on the Form Layout](#).
6. Define the set of signable data for each signature as described in [Defining Sets of Signable Data](#).

Following is an example of how the form will look:

The screenshot displays the Microsoft Office InfoPath 2003 interface for designing an 'Absence Request' form. The form is divided into several sections:

- Request Information:** Fields for 'Request Date' and 'Request Time'.
- Employee Information:** Fields for 'Name', 'ID Number', 'Department', 'Telephone Number', 'E-mail Address', and 'Signature Time'. There is a placeholder for a picture: 'Click here to insert a picture'.
- Manager Information:** Fields for 'Name', 'Telephone Number', 'E-mail Address', and 'Signature Time'. There is also a placeholder for a picture: 'Click here to insert a picture'.
- Absence Details:** A table with columns 'Start Date', 'End Date', 'Type', and 'Hours'. The 'Type' column has a dropdown menu currently set to 'Paid vacation', and the 'Hours' column contains the value '0.00'.


The 'Data Source' pane on the right shows a tree view of the data structure. The 'my:ManagerSignature' object is selected, showing its sub-objects: 'ARGraphicalSignature', 'SignatureTime', and 'SignedArea'. The 'my:EmployeeSignature' object is also visible above it.

Figure 55 Form with Multiple Signatures

### Creating Multiple Dependent Signatures


To create two or more dependent signatures, follow the procedure outlined above in [Creating Multiple Independent Signatures](#), but perform the following when [Defining Sets of Signable Data](#):

1. The set of signable data for the second signature should include the first graphical signature data object, whether directly or indirectly, so that a change in the image of the first signature will invalidate the second signature.
2. You must arrange the graphical signature objects in the **Data Source** so that the signature that should be signed first (the employee's in our example), is located in a higher place in the **Data Source** structure. This does not necessarily imply a higher nesting level, but if you flatten the whole Data Source structure, the first signature data object should appear in a higher position.

 **Note:** If user A, who is supposed to be the second signer, signs before user B, user A will lock user B's graphical signature field. This prevents user B from being able to add his graphical signature. However, InfoPath's digital signature for user B will be added successfully. A message pops up informing you that only the digital signature can apply.

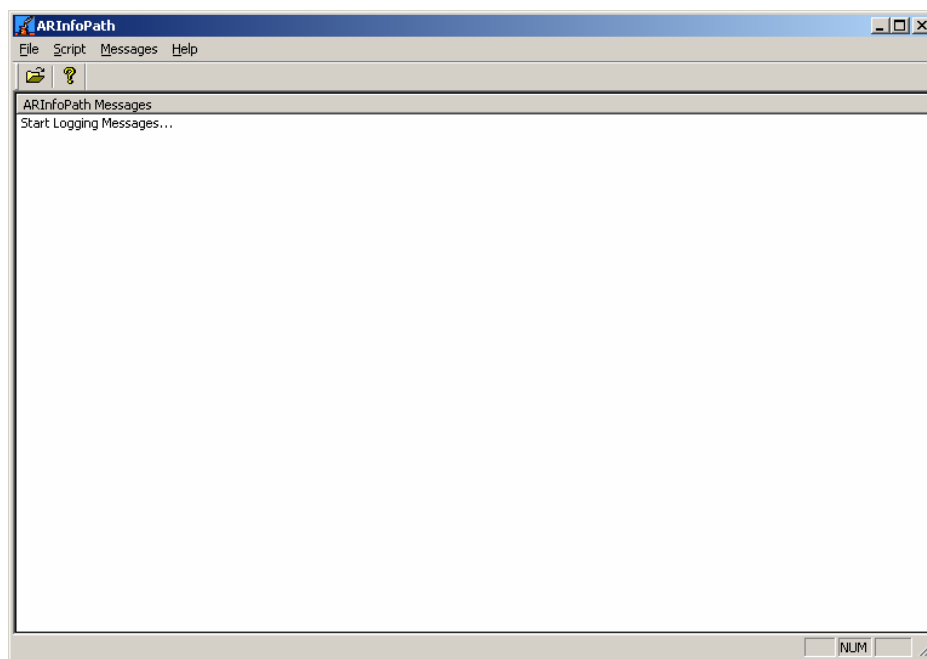
## Adding the CoSign Digital Signatures Toolbar

The CoSign Digital Signatures toolbar for InfoPath must be added to any form template that requires graphical signatures. To add this toolbar, the ARX InfoPath Designer application should be run once in a template's lifetime.

 **Note:** The addition of the CoSign Digital Signatures toolbar is not dependent on the graphical image group creation in the data source; it can be done either prior to or after the graphical signature is created in the data source.

### To add the CoSign Digital Signatures toolbar:

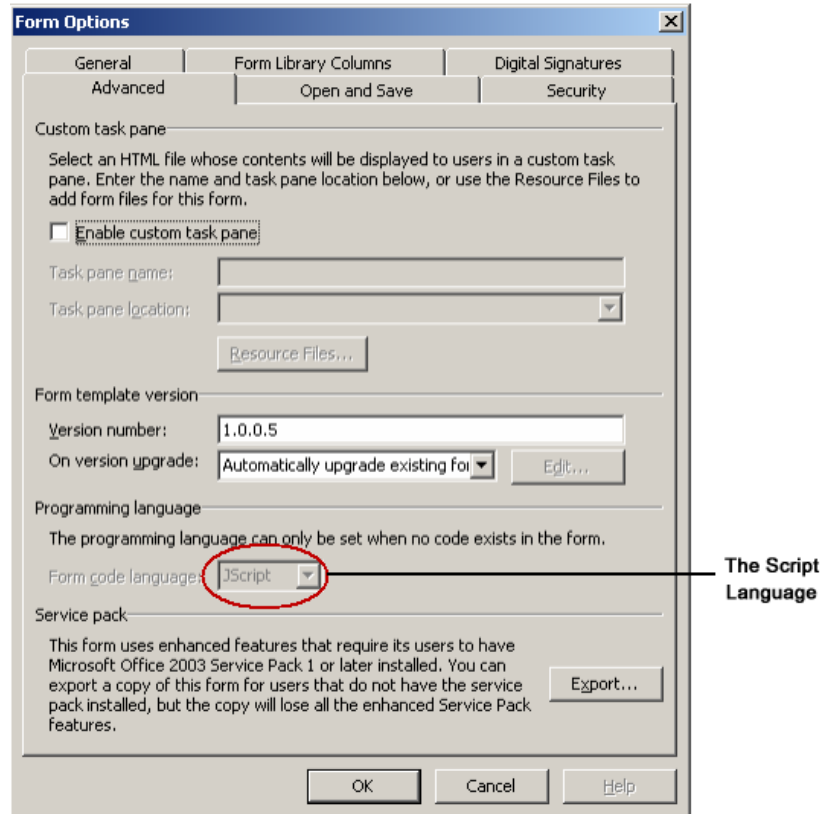
1. Run **Start > Programs > ARX CoSign > CoSign Control Panel**. The Control Panel appears.
2. **Double click Design InfoPath template**. The ARX InfoPath window appears ([Figure 56](#)).



*Figure 56 ARX InfoPath Window*

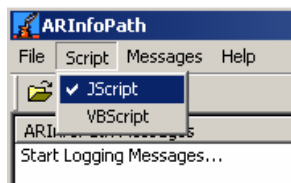
3. Find out your form's script language as follows:
  - a. Open your form in Design mode.

- b. Select **Tools > Form Options** (*Figure 57*).  
 Select the **Advanced** tab.  
 The script language being used appears in the **Form code language** field.



*Figure 57 Finding Out the Script Language*

- c. Click **OK** to exit the form.
4. Specify the script language of the form in the **Script** menu.



5. Open the template file (**File > Open**).  
 Since adding the CoSign Digital Signatures toolbar changes the template file, it must not be open by InfoPath at the same time.
6. Select **File > Generate**.  
 Some log entries should appear in the main application window.
- ◆ If the last log string is SUCCESS, the operation of adding the CoSign Digital Signatures toolbar was completed successfully.



- ◆ If the last log string is not SUCCESS, an error has occurred. Make sure the file is neither read-only nor opened by InfoPath, and select **File > Generate** again. If that was not the source of the problem, contact ARX technical support for assistance.

7. Select **File > Close** to close the ARX InfoPath Designer application.

The CoSign Digital Signatures toolbar is added, and the InfoPath template is now ready for distribution.



**Note:** *ARX InfoPath Designer saves a backup copy of the original template file before it changes the file. This backup copy is used for automatic restore in case the application fails to add the toolbar. This ensures that if the operation fails, the original template file remains the same.*

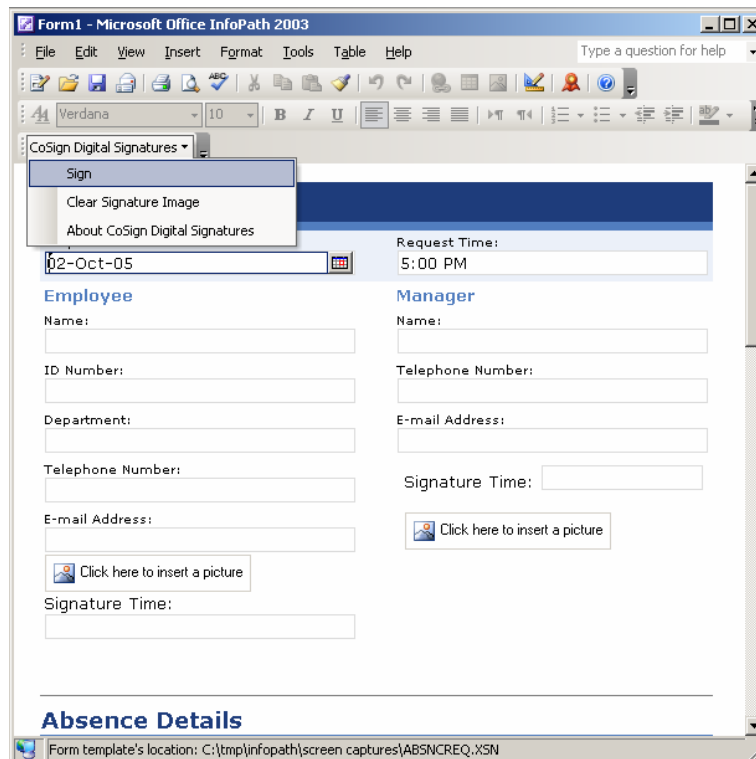
*Running ARX InfoPath Designer again with the same template, overwrites the last backup with the current template file.*

## Signing an InfoPath Form with a Graphical Signature

After the first two phases are complete, the end user can fill and sign a form based on the template.

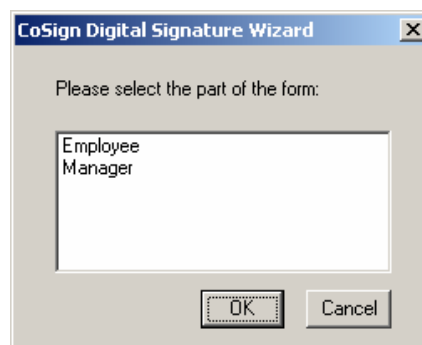
### To sign an InfoPath form:

1. Open a form and fill all the required fields.
2. Select **Sign** in the CoSign Digital Signatures toolbar ([Figure 58](#)).



*Figure 58 CoSign Digital Signatures Toolbar*

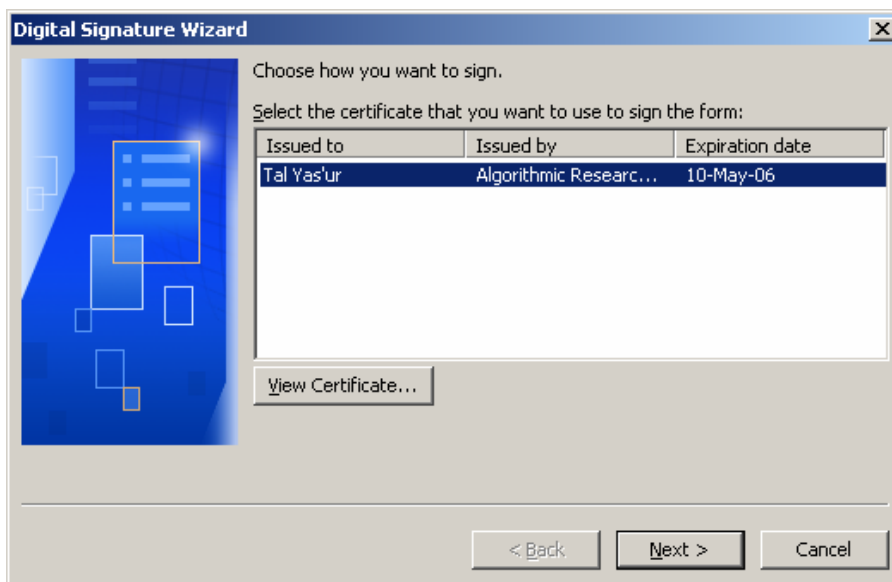
3. Select the area name to be signed:
  - ◆ If only one area is defined, that area is automatically selected.
  - ◆ If more than one area is defined in this template, the area selection dialog box pops up (*Figure 59*). Select one area and click **OK**.  
The Digital Signature Wizard – **Please select the part of the form** window appears.



*Figure 59 Area Selection Dialog Box*

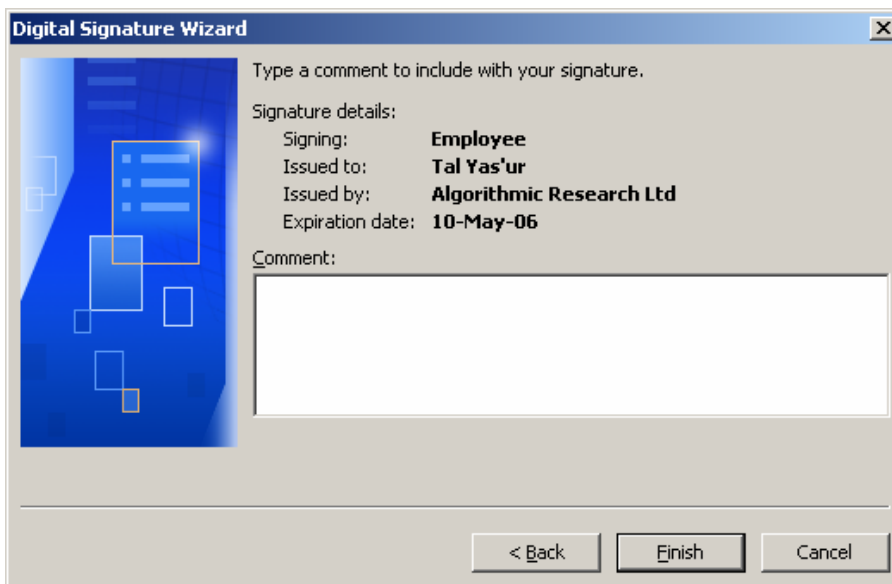
4. If there is more than one graphical image, a graphical image selection window appears, and the user must specify the desired graphical image.  
If there is only one graphical image for the user, that graphical image is selected.  
If the user has no graphical image, an error message appears.

5. A certificate selection window appears ([Figure 60](#)). Select the certificate you want to sign with and click **Next**.



*Figure 60 Selecting a Certificate*

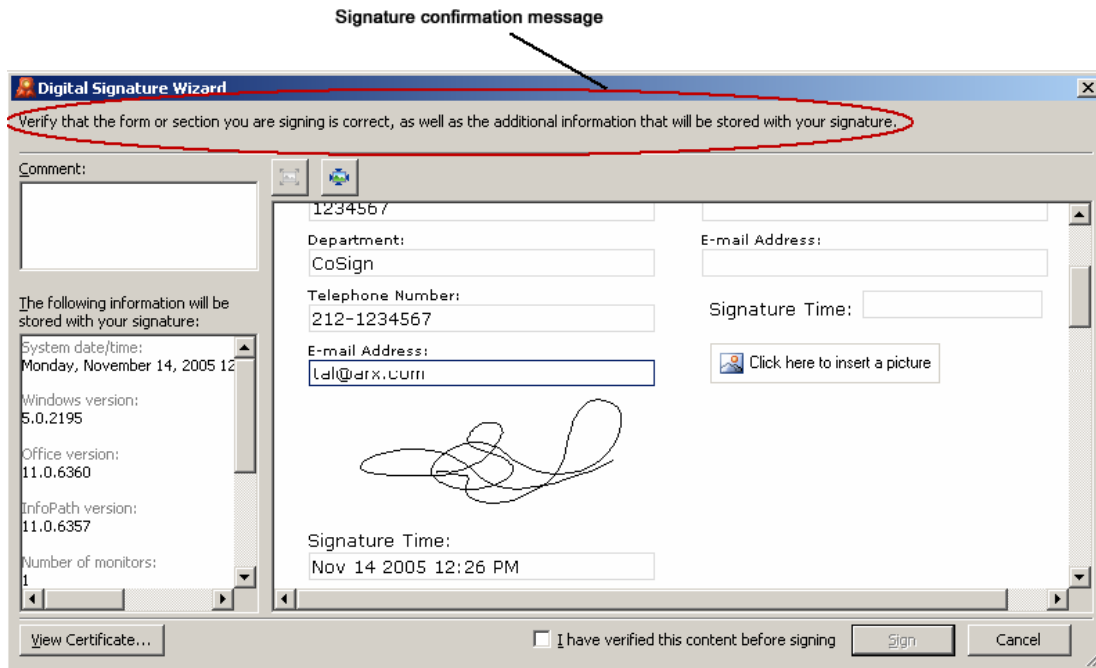
6. Optionally type a comment that will be attached to the signature ([Figure 61](#)) and click **Finish**.



*Figure 61 Adding a Comment to a Signature*

7. Verify that the document looks as expected ([Figure 62](#)), then check **I have verified this content before signing** and click **Sign**.




Note that the signature confirmation message is the one that was entered when the signed area was defined (refer to [Defining Sets of Signable Data](#)).



**Figure 62 Signature Confirmation Message**

The form is now digitally signed.


If you chose to display the signature time, it is shown as well ([Figure 62](#)).

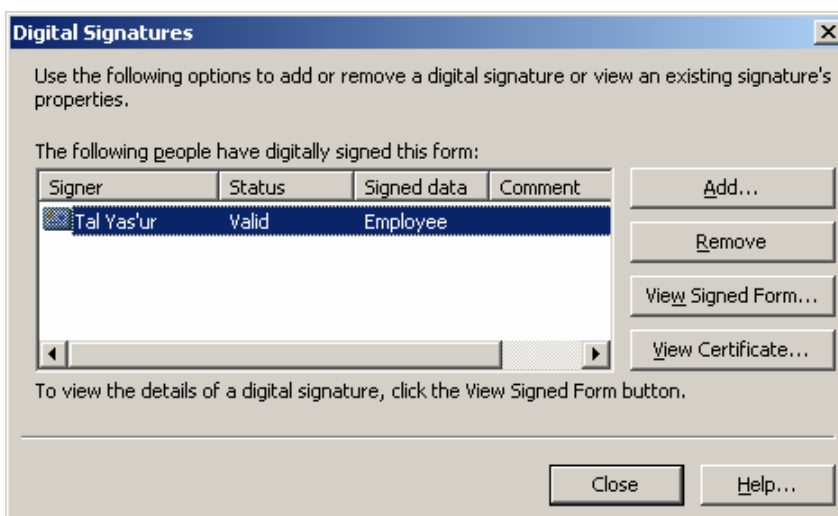
-  **Note:** *The time displayed on the form might differ slightly from the one stored with the signature because the time displayed on the form is taken from CoSign, while the time stored with the signature is taken by InfoPath from the machine's clock.*
-  **Note:** *After selecting the area to be signed, the graphical image and the time are written to the form even if the signing operation failed or was cancelled. In this case, you must manually remove the graphical image and the time field from the form (refer to [Clearing a Graphical Signature](#)).*
-  **Note:** *Although the graphical image field is of type **Picture**, do not insert any picture into it yourself. Doing so might lead to unexpected results in the signing operation.*

## Clearing a Graphical Signature

ARX's solution for InfoPath contains two components: the ARX graphical image object and InfoPath's standard digital signature. Since the ARX graphical image object is one of the data objects being signed, it is locked until you remove the associated InfoPath digital signature. Therefore, clearing a graphical signature entails first deleting the InfoPath digital signature, if it exists, and then deleting the ARX graphical image object.

**To clear a graphical signature from an InfoPath form:**

1. Remove the digital signature for the same signed area, if exists, as follows:  
Click  , select the signature to remove, and click **Remove** ([Figure 63](#)).



*Figure 63 Digital Signatures Dialog Box*

2. Remove the ARX graphical signature as follows:  
In the CoSign digital Signatures toolbar select **Clear Signature Image** ([Figure 58](#)). If more than one set of signable data is defined, you are prompted to select the signed area you wish to clear, otherwise it is automatically selected.

Note that there are cases where only the ARX graphical object is added to the InfoPath form while the InfoPath digital signature is not. In these cases, perform only step 2. The following scenarios can lead to such cases:


- ◆ There is no certificate to select from.
- ◆ The operation was cancelled by the user.
- ◆ The signing operation failed.

## Validating a Signature

Validation of digital signatures in InfoPath is the same whether you use a graphical signature or not. The validation operation is performed by the InfoPath standard support in digital signatures, and it is never attached to a specific signature image.

When validating a form, the graphical image of the signature as well as the date and time fields are treated like any other data in the form.

### To validate a signature in a form:

1. Click  . The Digital Signatures dialog box pops up ([Figure 63](#)) with a list of all the signatures in the form.
2. Check the value in the **Status** column for a specific signature.

- ◆ If the status is **Valid**, the signed data was not changed since it was signed.
- ◆ If the status is **Invalid**, then the signed data was tampered with.



*InfoPath verifies the digital signatures in a form when the form is opened. If a digital signature is not valid, a pop up message appears with the notification:*

***One or more digital signatures in this form could not be verified.***

3. Click **View Signed Form** to view the form as it was at the time the signature was created.
4. Click **View Certificate** to learn more about the signing certificate. Refer to [Signature Details](#) for more information about viewing a certificate.



**Note:** *InfoPath supports sectional signing, therefore a signature can still be valid even though the form was changed, as long as the fields that are part of the signed area were not changed.*

## Digital Signatures Support without Graphical Signatures

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InfoPath forms can be digitally signed by CoSign certificates without using the graphical image feature. To do so, use only InfoPath's built-in functionality to perform all tasks, as follows:

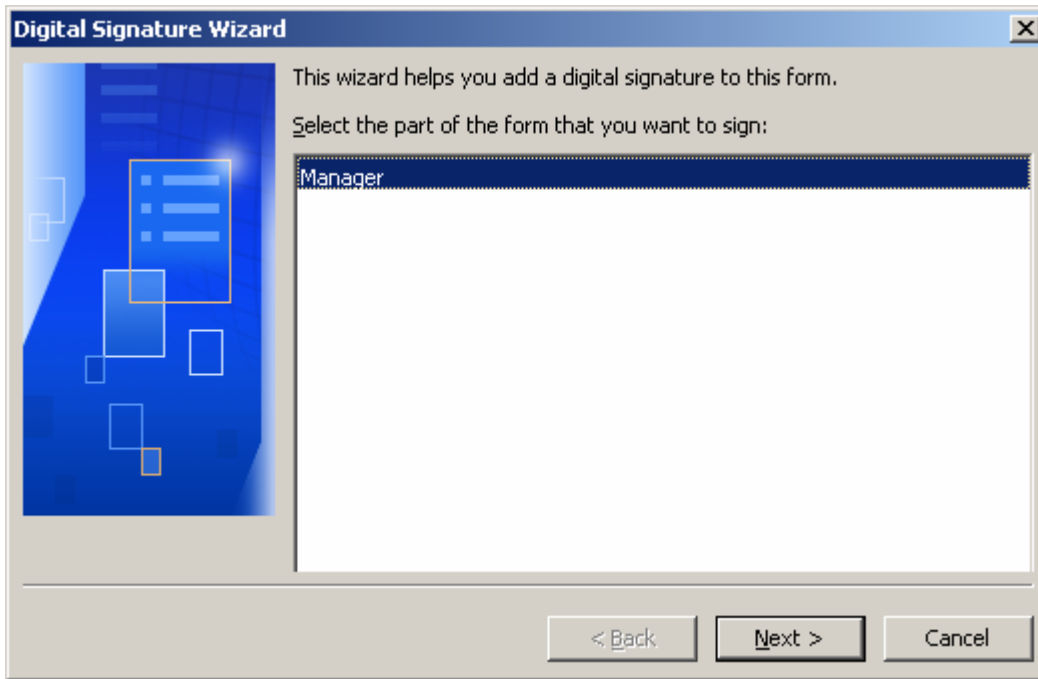
- ◆ **Defining sets of signable data** – The first step in integrating digital signatures in an InfoPath template is to define one or more sets of signable data when designing the form template. The definition of signable data is the same whether you use a graphical image or not. Refer to [Defining Sets of Signable Data](#) for instructions on how to define a set of signable data in a template.
- ◆ **Signing an InfoPath Form without a Graphical Signature** – Refer to [Signing an InfoPath Form without a Graphical Signature](#).
- ◆ **Validating a Signature** – Validating signatures is the same whether you use a graphical image or not. Refer to [Validating a Signature](#).
- ◆ **Removing a Signature** – To remove a digital signature from an InfoPath form, refer to the first step in [Clearing a Graphical Signature](#).

### Signing an InfoPath Form without a Graphical Signature

After one or more sets of signable data are defined, a user can fill out a form and choose to sign any of these sets.


#### To add a signature to a form:

1. Open a form and fill the required fields.
2. Click . The Digital Signatures dialog box pops up with a list of all the signatures in the form (if it is the first signature in the document the list is empty).
3. Click **Add**. The first dialog of the signing wizard pops up, requesting you to select the part of the form you want to sign ([Figure 64](#)). Select a part and click **Next**.



*Figure 64 Selecting the Part to be Signed*

4. Select the certificate you wish to sign with and click **Next**.
5. Optionally type a comment that will be attached to the signature, and click **Finish**.
6. Verify that the document looks as expected, then check **I have verified this content before signing** and click **Sign**.

 **Note:** Steps 4 through 6 are similar to the steps taken when signing with a graphical signature. These steps are described in detail in [Signing an InfoPath Form with a Graphical Signature](#).



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## Chapter 5: Signing Adobe Acrobat Documents

The CoSign client enables you to digitally sign Adobe Acrobat documents using both Adobe Acrobat and Adobe Reader, as well as add your graphical signature to the PDF. This enables you to:

- ◆ **Easily sign an Acrobat document** – The Acrobat document may contain multiple signatures, and each signature can be located in a different part of the document. It is also possible to generate several signatures for the same end-user. If a document is modified, the end-user is notified that the document was modified and is able to view the specific version of the document that was signed.
- ◆ **Certify an Acrobat document** – Certification is more stringent than the regular signature operation. When a document is certified, it can be defined that no modification can be applied to the document (not even the addition of a new version to the document), or it can be defined that only certain fields in the document can be updated. Certification is available in Acrobat 6/7/8.
- ◆ **Validate the signature of an Acrobat document** – Validation assures you that the document version that was signed was not modified after it was signed and that a trusted CA approves the user who performed the signature operation.

The solution for Adobe 6/7/8 also does not require a client installation on the validator's side.

As part of the CoSign Web Services solution, the CoSign appliance provides a new Web Service mechanism called *Adobe Roaming ID*. This mechanism enables Adobe Acrobat 8 or Adobe Reader 8 to directly interface the CoSign appliance for digital signature operations, without requiring the installation of a CoSign client in the end user's PC. This chapter provides instructions on how to setup Adobe Acrobat 8 and Adobe Reader 8 to directly use the CoSign appliance for digital signature operations.

-  **Note:** *Adobe Acrobat includes sophisticated mechanisms for handling digital signatures. These mechanisms enable you to maintain different versions of the Acrobat document, so that each digital signature actually signs a different version of the document. Be aware that even if the document is modified, older digital signatures will be validated against an older version of the document.*
-  **Note:** *CoSign is currently compatible with versions 6.x, 7.x, and 8.x of Adobe Acrobat, and versions 6.x, 7.x, and 8.x of Adobe Reader. Refer to the Adobe documentation for complete information on Adobe's digital signature capabilities.*

This chapter describes signing and validating an Acrobat Document using Adobe Acrobat 6/7/8, as well as signing and validating signatures using Adobe Reader 6/7/8.

## Signing an Acrobat Document using Adobe Acrobat 6/7/8

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**Note:** *CoSign supports Adobe 6, Adobe 7, and Adobe 8, but the dialog boxes shown in this chapter are Adobe 6 dialogs. They may differ slightly from the corresponding Adobe 7/8 dialogs.*

Using Adobe Acrobat 6/7/8, you can generate and validate digital signatures. The following sections describe how to use the Acrobat 6 *Windows Certificate Security* and Acrobat 7/8 *Adobe Default Security* signature handlers to set up, sign, and validate digital signatures, as well as certify Acrobat documents. They also describe how to sign and validate signatures using Adobe Reader 6/7/8.

For each signature request, CoSign is activated for the purpose of signature operation only.

### Setting up Adobe Acrobat 6/7/8 to Use Digital Signatures



**Note:** *This setup procedure only needs to be performed once per workstation.*

#### To setup Acrobat to use digital signatures:

1. Make sure a graphical image is stored in the local CoSign workstation.
2. Make sure the Adobe Acrobat application is closed.
3. Refer to [Managing Graphical Signatures](#) for instructions on how to import the CoSign based graphical images into the local Adobe installation in the end user's PC.
4. In Acrobat, select **Edit** → **Preferences** → **General**. The Acrobat *Preferences* dialog box appears.

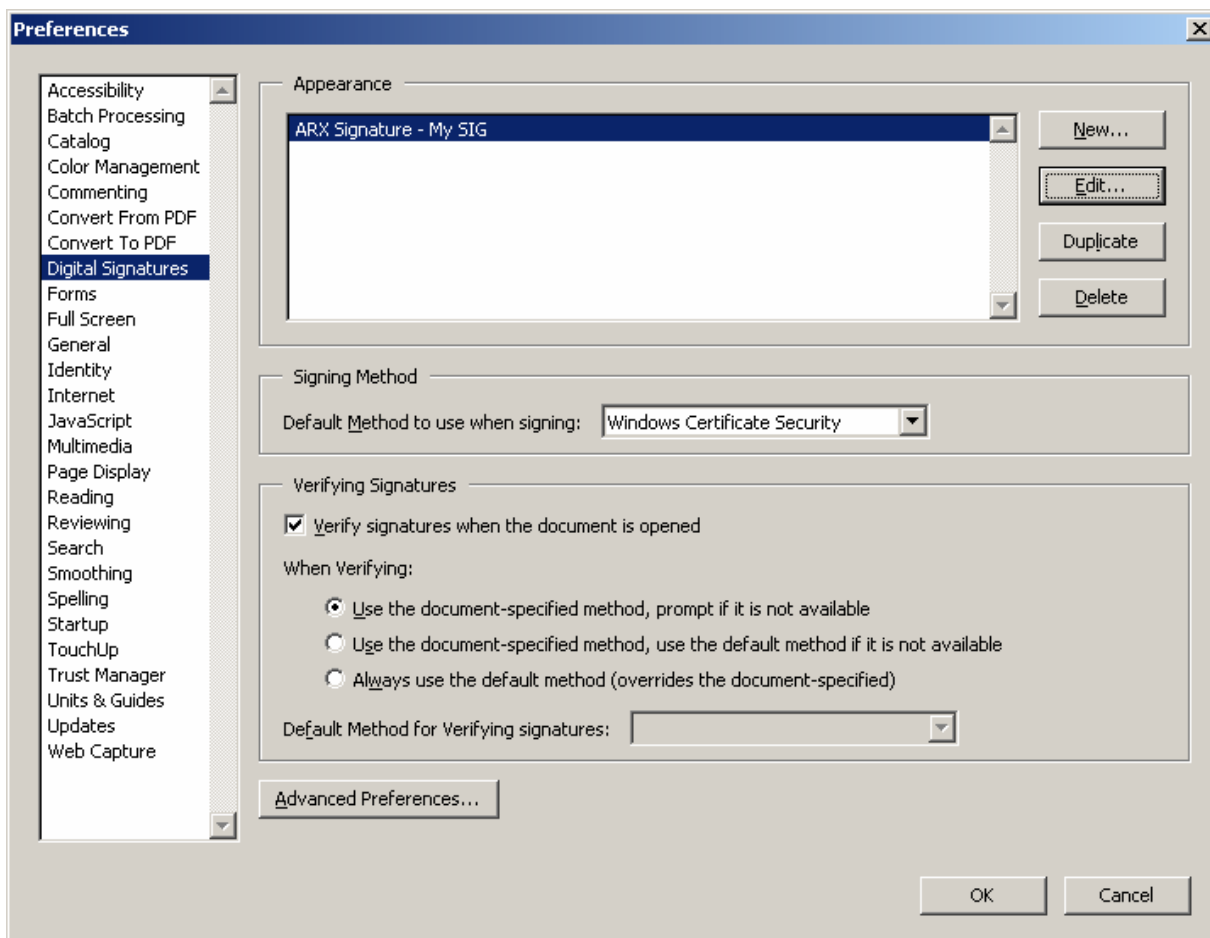
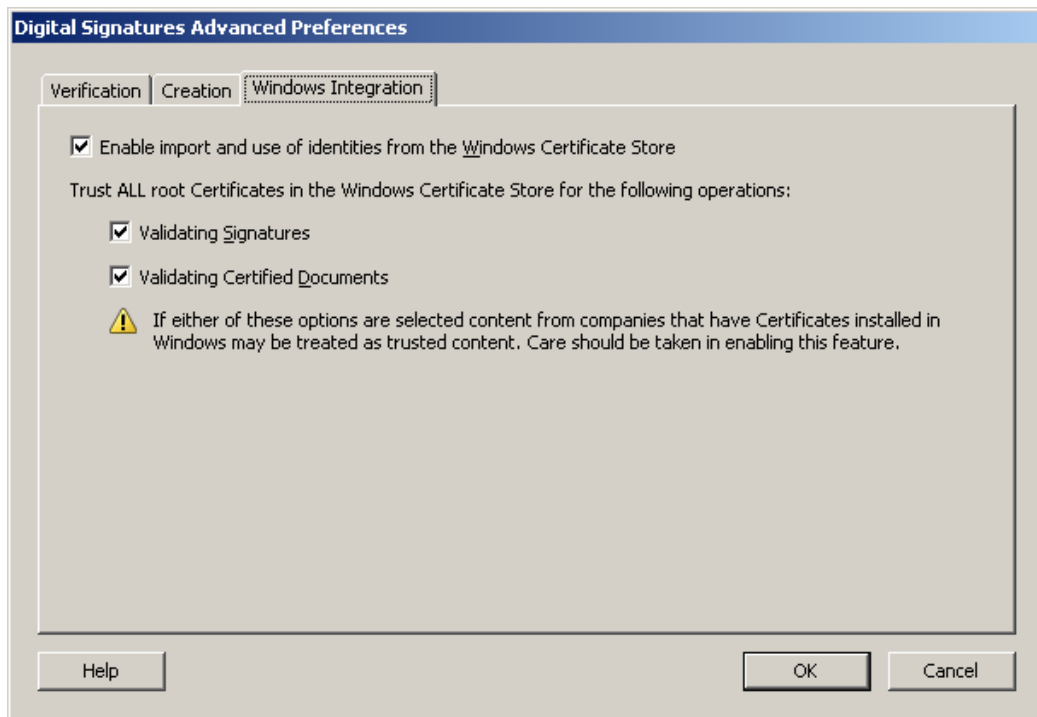


Figure 65 Acrobat 6 Preferences Dialog Box


5. Select the **Digital Signatures** option. The *ARX Signature -<signature name>* appearance appears selected in the Appearance box.
6. In the **Signing Method** section, select **Windows Certificate Security** as the “**Default Method to use when signing**”.
7. Click **Advanced Preferences**. The *Digital Signatures Advanced Preferences* dialog box appears with the **Windows Integration** tab selected.



*Figure 66 Adobe Reader Advanced Preferences Dialog Box*

8. Check all the options in the **Microsoft Windows Integration** tab.
9. Click **OK** to return to the *Preferences* dialog box.

Using the **Edit** button, you can edit the appearance of the digital signature (refer to [Editing the Signature's Appearance](#)).

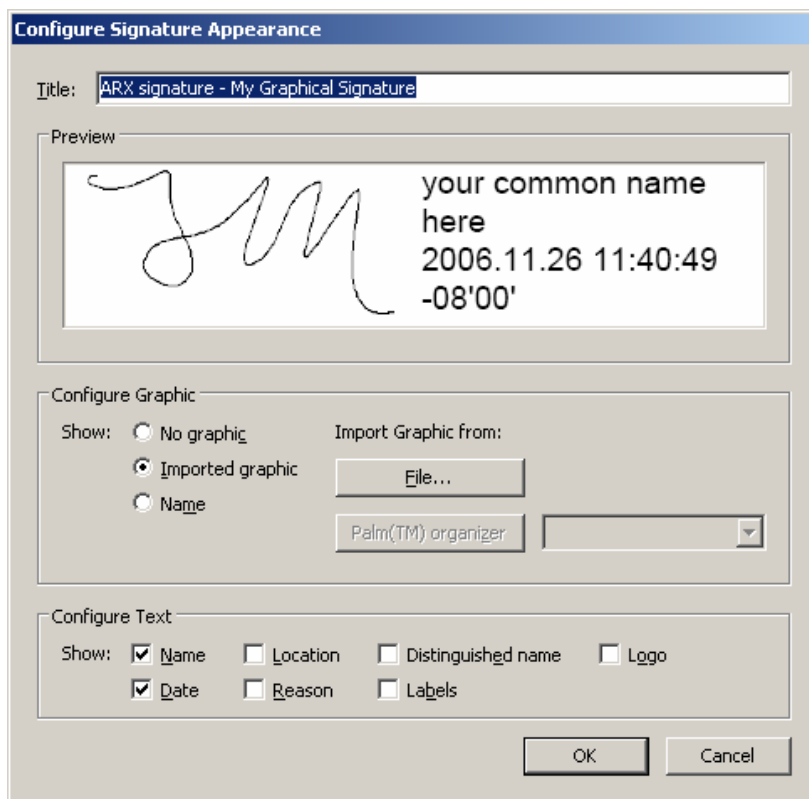
 **Note:** Setting the **Verify signatures when document is opened** option automatically activates a validation procedure for all of the document's digital signatures when the document is opened. The default is that digital signatures are not validated automatically when a document is opened.

### ***Editing the Signature's Appearance***

You can configure the visual look of the digital signature by specifying the information to be presented in the digital signature location in the Adobe document.

#### **To edit the appearance of the signature:**

1. In the *Preferences* dialog box ([Figure 65](#)), select the relevant *ARX Digital Signature* appearance.
2. Click **Edit**. The *Configure Signature Appearance* dialog box appears.




*Figure 67 Adobe 6 Configure Signature Appearance Dialog Box*

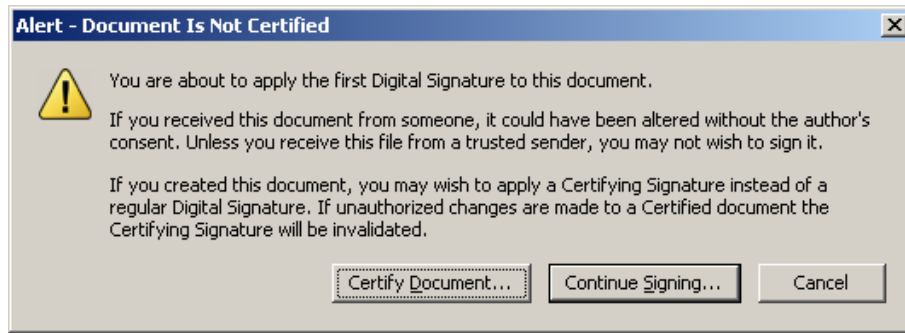
3. In the **Configure Graphic** section, specify one of the following:
  - ◆ **No graphic** – No graphic will be displayed.
  - ◆ **Imported graphic** – The user’s graphic signature will be displayed with the signature. Avoid using the **PDF file** button for specifying which file to load, since the **Update Acrobat** option in the CoSign control panel loads the user’s graphic signature.
  - ◆ **Name** – Only the name of the signer will be displayed.
4. In the **Configure Text** section, specify which text elements to include in the signature.
5. Click **OK** to return to the *Preferences* dialog box.

## Signing an Adobe Acrobat Document – Acrobat 6/7/8

**To digitally sign an Acrobat document using Acrobat 6/7/8:**

1. In Acrobat, open the document you wish to sign.
2. Click  and select **Sign this document**, or select **Document** → **Digital Signatures** → **Sign this Document**.

The following alert pops up:



3. Specify whether to certify the document or sign the document. For information on document certification refer to [Certifying an Adobe Acrobat Document – Acrobat 6/7/8](#). If you wish to sign, but not certify the document, click **Continue Signing**.
4. If the document contains no signature fields, the following dialog box appears.



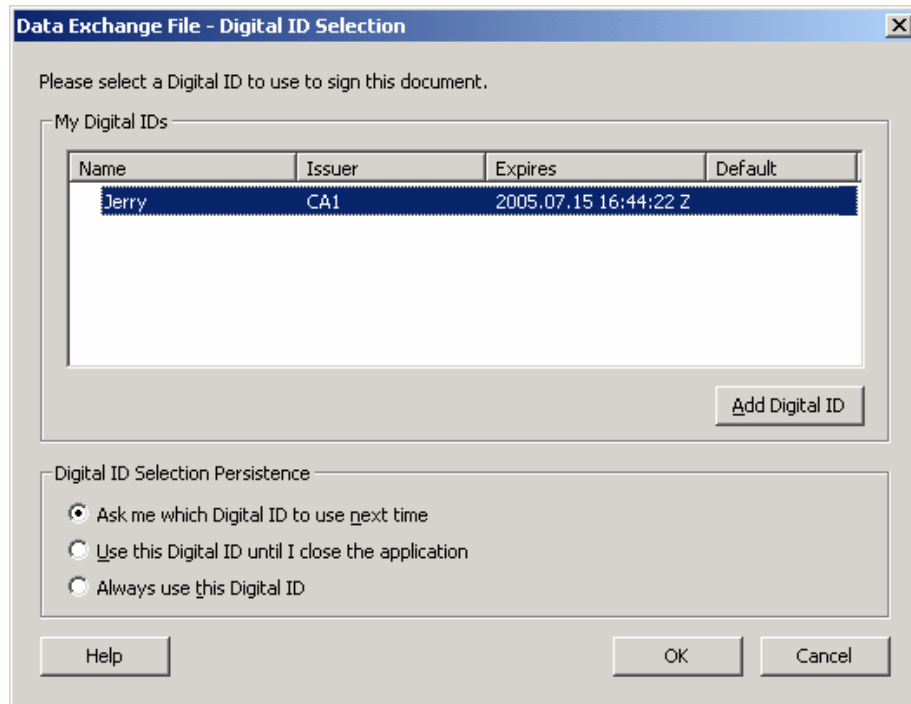
*Figure 68 Acrobat 6 Sign Document Dialog Box (signature fields do not exist)*

If the document already contains place holders for digital signatures, the following dialog box appears:



*Figure 69 Acrobat 6 Sign Document Dialog Box (signature fields exist)*

5. Select the **Create a new signature field to sign** option.  
You can alternatively choose to create a new invisible signature, which will have no visible representation in the document, or select an existing empty digital signature field.
6. In the location where you want to add a signature, click and drag the cursor to create a rectangle on the screen.
7. Click **Next**. The *Digital ID Selection* dialog box appears.



*Figure 70 Acrobat 6 Digital ID Selection Dialog Box*

8. Select your certificate (even if you have a single certificate), and click **OK**  
The Apply Signature to Document dialog box appears.

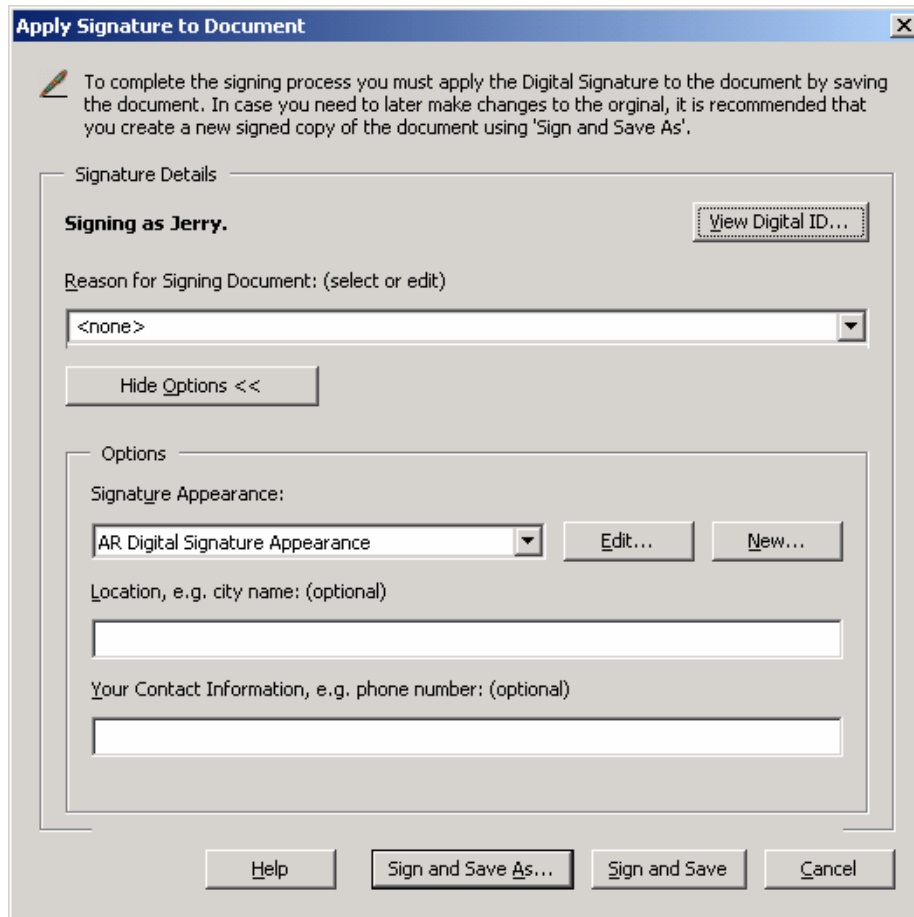


Figure 71 Acrobat 6 Apply Signature to Document Dialog Box

9. Enter the reason for the signature and other relevant details.
10. In the **Signature Appearance** field, the *ARX Digital Signature* appearance is automatically selected. You can edit the appearance of the digital signature using the **Edit** button (refer to [Editing the Signature's Appearance](#)).
11. Click **Sign and Save** or **Sign and Save As**.

The digital signature is placed in the designated location and appears as defined in the *ARX Digital Signature* appearance.

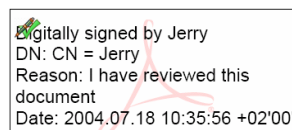


Figure 72 Acrobat 6 Digital Signature Example

If you have a graphical signature image (refer to [Using the Graphical Signature Management Application](#)), the graphical image appears next to the validation image.



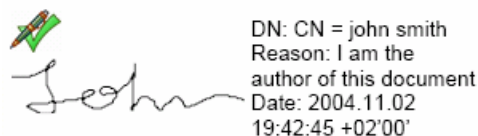





Figure 73 Acrobat 6 Graphical Signature Image

### Modifying a Signed Acrobat Document





If you modify a signed document, all existing digital signatures are marked with a , to indicate that the signature is valid, but the document has been updated since it was signed. The digital signature matches an old version of the document that can be displayed. Following validation, the icon  indicating that the document was modified is displayed in the **Signatures** palette.



Saving the document will mark all existing signatures with , to indicate that the digital signature needs to be validated when the document is opened.

You can analyze the differences between the current document and the signed document using the **Compare Signed Version to Current Document** option (refer to [Operations on Signatures in Adobe Acrobat 6/7/8 Documents](#)).

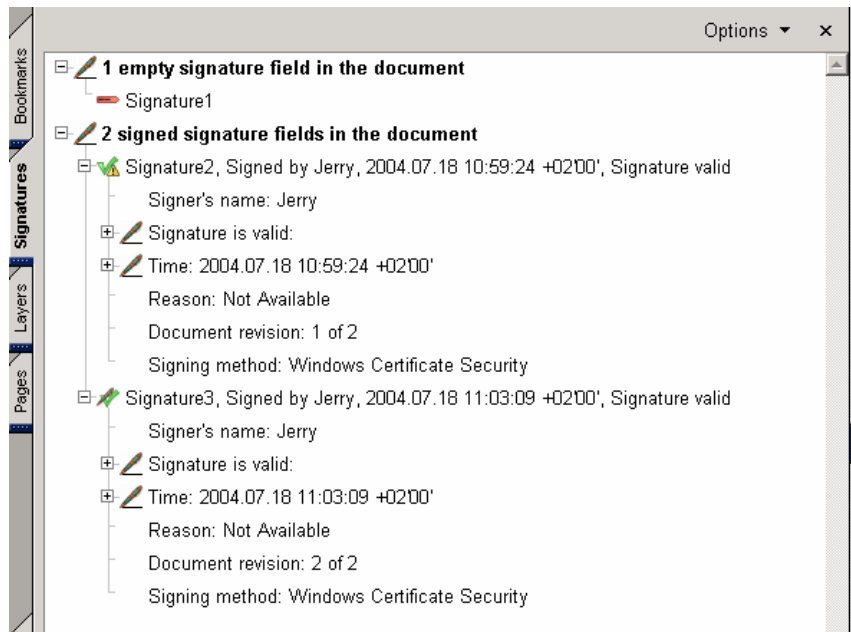
### Operations on Signatures in Adobe Acrobat 6/7/8 Documents

There are two ways to view and validate digital signatures:

- ◆ In the location of the digital signature there is a validation image, which can be one of the following images:
  - ◆  – Signature is validated.
  - ◆  – Signature needs to be validated.
  - ◆  – Signature is not validated.
  - ◆  – Signer's identity is unknown.

 **Note:** The image  can be combined with other images to indicate that the document has been updated since it was signed.

- ◆ Using the **Signatures** palette on the left side of the Acrobat window ([Figure 74](#)). The window displays the existing digital signatures associated with the Acrobat document. Information is listed for each signature, including the name of the signer, signature date, and document revision.




*Figure 74 Acrobat 6 Signature Palette*

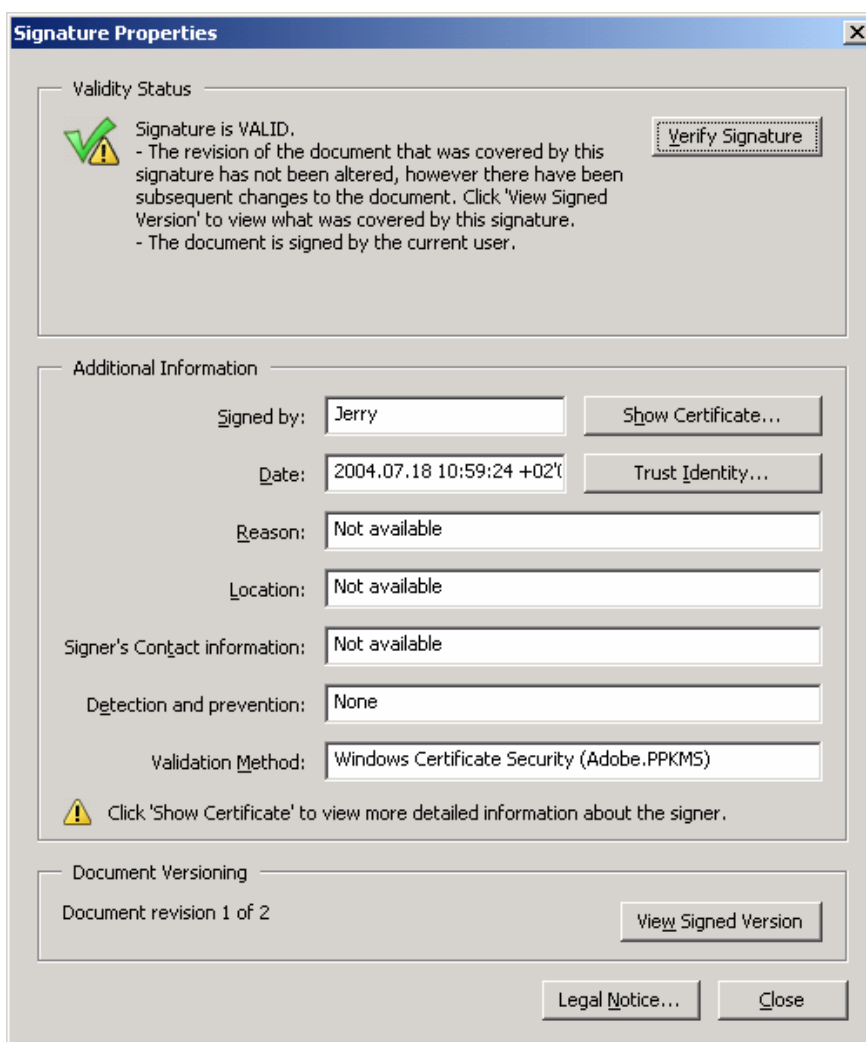
The following digital-signature operations can be performed by right-clicking either the image of the digital signature or the digital-signature entry in the **Signatures** palette.

- ◆ **Clear Signature Field** – Clears the digital signature but keeps the digital-signature field. This enables you to sign the document again and put the new digital signature in the original field.
- ◆ **Sign Signature Field** – Enables you to digitally sign the Acrobat document in a location that previously contained a digital signature and was cleared using the **Clear Signature** option.
- ◆ **Delete Signature Field** – Deletes an empty signature field.
- ◆ **Validate Signature** – Performs a validation of the digital signature against the document information. A dialog box pops up, displaying the results of the signature validation.



*Figure 75 Acrobat 6 Signature Validation Status*

- ◆ **View Signed Version** – If the document was modified after the digital signature was added,  will be added to the original signature image. The **View Signed Version** option enables you to view the actual document that was signed.
- ◆ **Compare Signed Version to Current Document** – Displays the differences between the current document and the version of the document that was signed using this digital signature.
- ◆ **Go To Signature Field** – Enables you to locate a digital signature in the Acrobat document.
- ◆ **Properties** – Displays detailed information about the signature, including validity of the signature, Signer ID, Signature date and other details.  
Also, the certificate details of the signer can be viewed by clicking **Show Certificate**.



*Figure 76 Acrobat 6 Signature Properties Dialog Box*

Access the following options by clicking **Options** at the top of the Signatures palette:

- ◆ **Validate All Signatures** – Checks all the signatures in the document and validates them.

- ◆ **Clear all signature fields** – Removes all digital signatures from the document and leaves only digital signature place holders.



**Note:** *By clicking a digital signature image, a validation action is executed. After a successful validation, ✓ is displayed.*


## Certifying an Adobe Acrobat Document – Acrobat 6/7/8

In Adobe 6/7/8 you can perform an operation called *Document Certification*, which is “stronger” than the regular signature operation: when a document is certified, you can define the following:

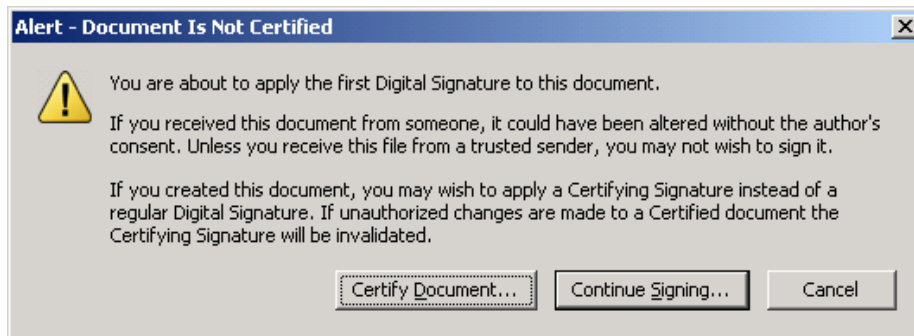
- ◆ No modification can be applied to the document (not even the addition of a new version to the document).
- ◆ Only remarks can be added to the base PDF document.

During certification, the document is signed with your Private Key and Certificate.

### To certify a document:

1. In Acrobat, open the document you wish to sign.
2. Click  or select **Document → Digital Signatures → Sign this Document**.

An alert pops-up:



*Figure 77 Acrobat 6 Document Certification Alert*

3. Click **Certify Document**.

The Save as Certified Document – Choose Allowable Actions dialog box appears.

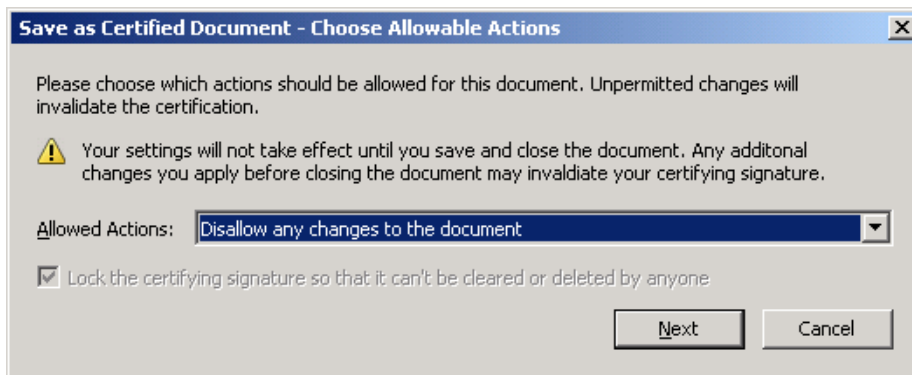


Figure 78 Acrobat 6 Selecting Certification Level

4. In the **Allowed Actions** field, specify how stringent the certification should be. For example, you can specify that certification be irreversible (cannot be undone).
5. Click **Next**. The regular digital signature dialog box appears.

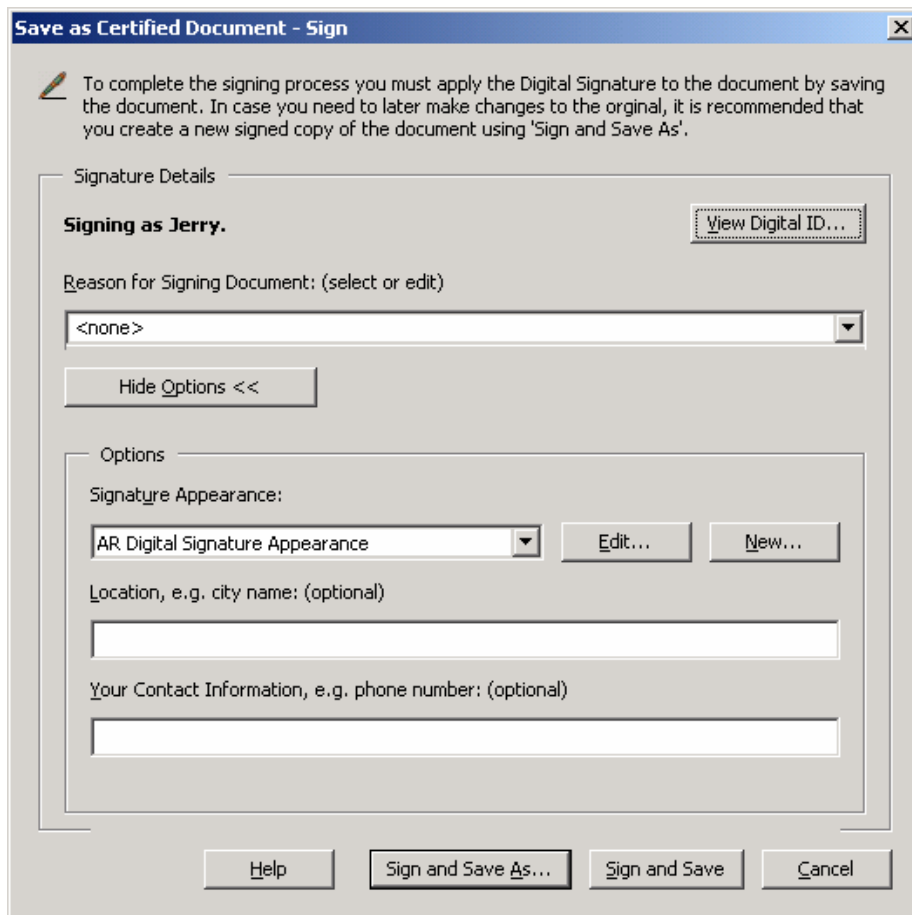


Figure 79 Adobe 6 Apply Signature to Certified Document Dialog Box

6. Continue the process like any regular document signing process (refer to [Signing an Adobe Acrobat Document – Acrobat 6/7/8](#)).

When the process is completed, the certification image appears in the document:

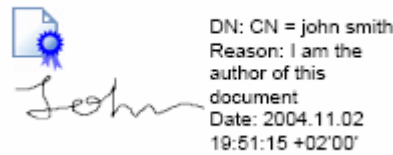



Figure 80 Acrobat 6 Certification Image Example


 **Note:** Only a file that is not signed can be certified, which means that a file that contains digital signatures can not be certified.

### Using the Update Acrobat Option in the Graphical Signatures Utility

This option creates a new appearance called *ARX Signature - <graphical signature name>* into which it imports the user's graphical digital signature. This enables Adobe Acrobat or Adobe Reader to incorporate CoSign graphical images in the Adobe graphical signature when a digital signature operation is activated.

The utility is activated by first activating the *Graphical Signature Management* application, then selecting the name of the graphical signature you wish to use in Acrobat, and then clicking **Update Acrobat** (refer to [Managing Graphical Signatures](#)). This option is enabled only if the *Graphical Signature Management* application utility is working in user mode, in which the user can register his/her own graphical image.

To edit the various settings of the *ARX Digital Signature* appearance, refer to *Editing the Signature's Appearance*.

 **Note:** It is recommended to activate this option when Adobe applications are not running, to prevent file-sharing problems.

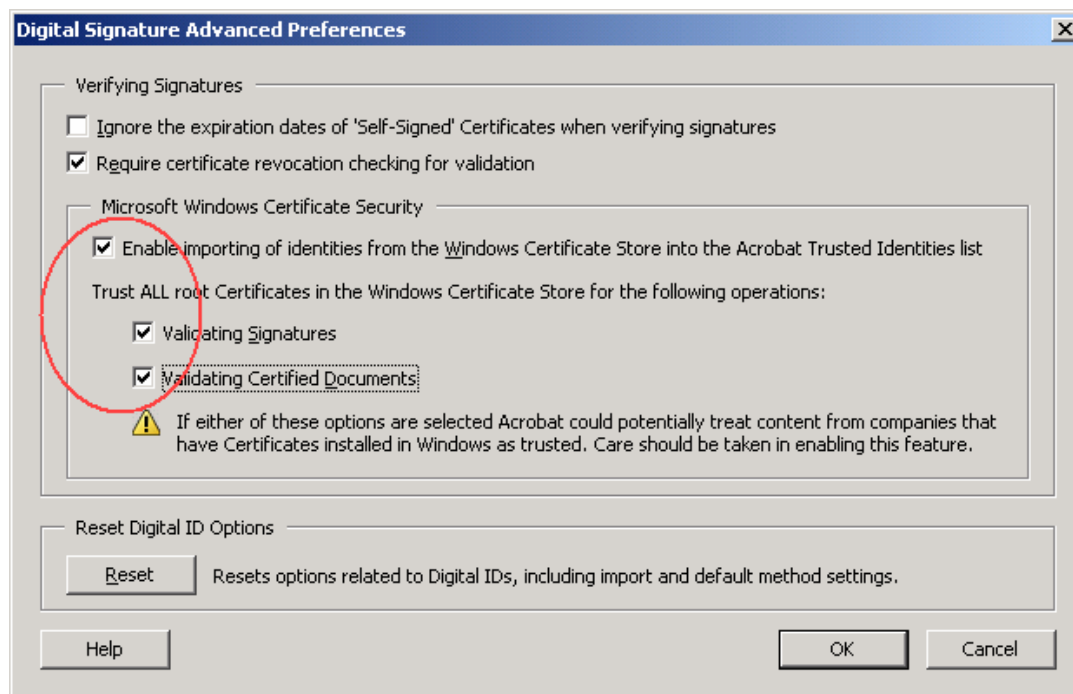
### Validating CoSign Signatures Using Adobe Reader 6/7/8

Adobe Reader enables you to view and validate digital signatures in the document.

No plug-in is necessary for the proper validation of an Adobe 6/7/8 document.

**To setup Adobe Reader 6/7/8 to validate signatures, perform the following once:**

1. Install the organization's Root CA Certificate. Refer to [Installing the ROOT Certificate](#).
2. In Acrobat, select **Edit → Preferences → General**. The Acrobat *Preferences* dialog box appears.
3. Click **Advanced Preferences**. The *Digital Signature Advanced Preferences* dialog box appears.



*Figure 81 Acrobat 6 Advanced Preferences Dialog Box*

4. Check all the options in the **Microsoft Windows Certificate Security** section.
5. Click **OK** to return to the *Preferences* dialog box.
6. Click **OK** to exit the *Preferences* dialog box.

The digital signatures appear inside the Acrobat document next to the validation symbol. If the digital signature contains a graphical signature, the graphical signature is displayed as well.

When a document containing digital signatures is opened, a question mark is displayed next to each signature. After you validate the signature, the question mark symbol changes to a validated mark.

The following digital-signature operations can be performed by right-clicking either the image of the digital signature or the digital-signature entry in the **Signatures** palette.

- ◆ **Validate Signature** – Performs a validation of the digital signature against the document information.
- ◆ **Properties** – Displays detailed information about the signature, including validity of the signature, signature date, user ID, signature creation date, certificate expiration, certificate issuer, and certificate details.
- ◆ **Go to Signature Field** – Enables you to locate a digital signature in the Acrobat Document.
- ◆ **Validate all Signatures** – Checks all the signatures in the document and validates them. This option can be viewed only from the **Options** button at the top of the Signatures palette.

- ◆ **View Signed Version** – Enables the user to view the exact version of the document that was signed.



**Note:** Adobe Reader can be configured to automatically validate digital signatures on opening a document by setting the **Verify signatures when document is opened** option. Refer to [Setting up Adobe Acrobat 6/7/8 to Use Digital Signatures](#).

## Signing an Acrobat Document Using Adobe Reader 6/7/8

You can also perform signature operations using Adobe Reader version 6/7/8. However, you need to use specially formatted Acrobat files that already contain signature fields. Once you locate a signature field in the document, you can perform the digital-signature action.

Once you select the digital signature box, the signing process is similar to the signing process using Adobe Acrobat (refer to [Signing an Adobe Acrobat Document – Acrobat 6/7/8](#)).

## Signing a PDF document Without Using Adobe Acrobat

To sign PDF files without installing Adobe Acrobat, you can use either OmniSign (refer to [Chapter 6: OmniSign – Sign Any Printable Data, Anywhere](#)) or the `arfilesign.exe` utility (refer to [Chapter 7: The ARFileSign Utility](#)).

## Signing in Adobe Acrobat/Reader 8 Using Adobe Roaming ID

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In Adobe Reader 8 and Adobe Acrobat 8, Adobe introduces a new digital signature mechanism called *roaming ID* that is based on Web Services. This mechanism enables you to digitally sign PDF documents without installing any software in the client PC.

Adobe Reader and Adobe Acrobat can interface the CoSign appliance through a Web Service interface. The roaming ID mechanism requires a user to authenticate to the CoSign appliance based on a user name and password and perform a digital signature operation using the user's signature key inside the CoSign appliance.

You can use roaming ID in any of the following modes:

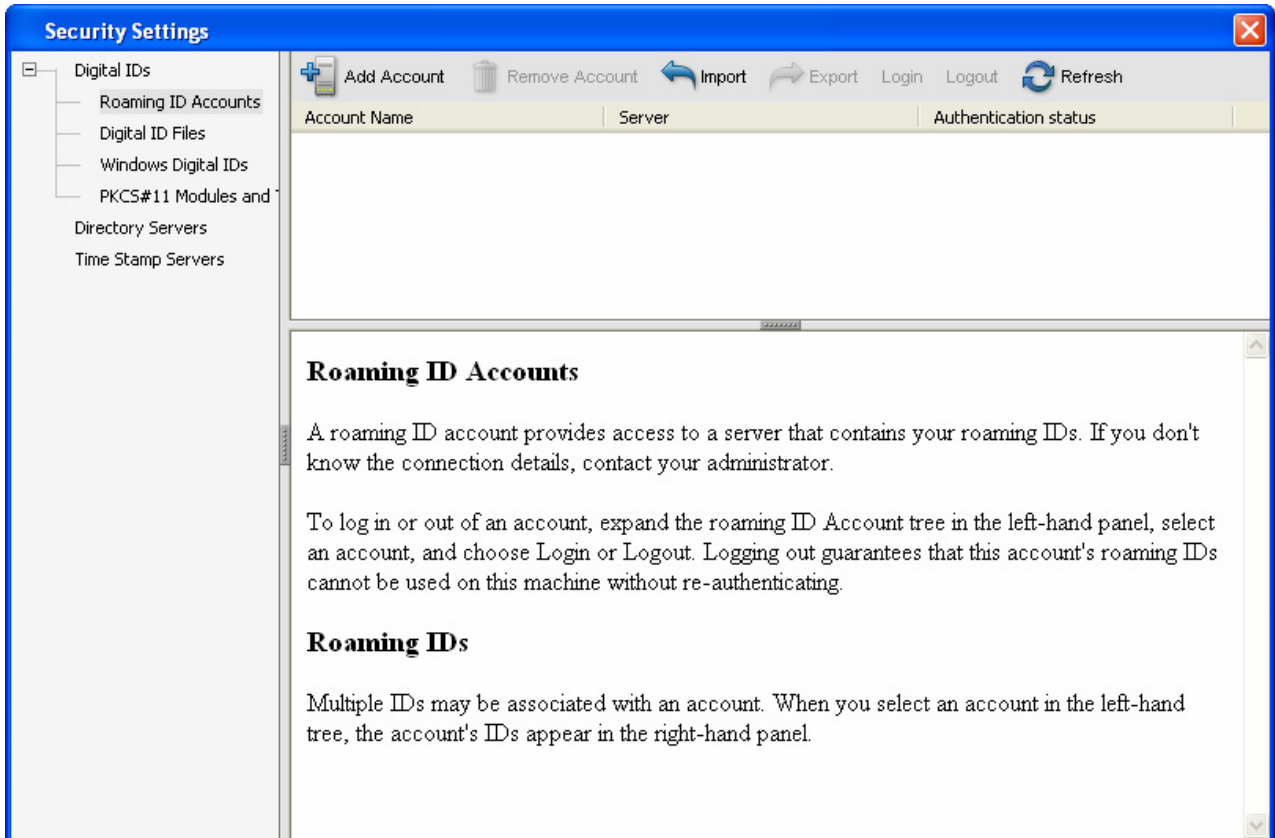
- **User generates a roaming ID profile** – In this mode, the PDF document contains a signature field that does not include a roaming ID profile. You must define a roaming ID profile in advance, and use it during the digital signature operation. Refer to [Generating a Roaming ID Profile](#).
- **Signature field already contains a URL** – In this mode, the PDF document contains a signature field which already includes the URL of the CoSign appliance that will enable the end user to invoke the digital signature Web Service in Adobe. In this mode, the end user needs only to perform a digital signature operation. Refer to [Signing a Signature Field that Contains a URL](#).



## Generating a Roaming ID Profile

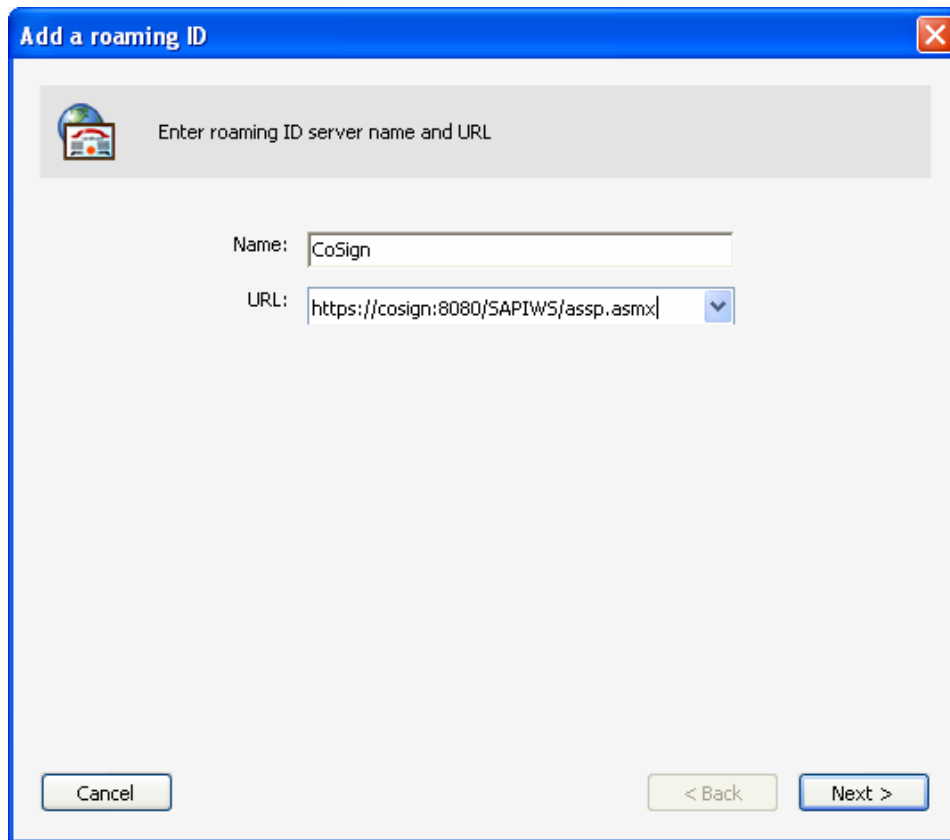
To define a roaming ID profile:

1. In Adobe Reader, select **Document > Security Settings**. The *Security Settings* dialog box appears.




*Figure 82 Security Setting Dialog Box*


2. Select **Roaming ID Accounts** in the left pane of the *Security Settings* dialog box.
3. Click **Add Account**. The *Add a Roaming ID* dialog box appears.



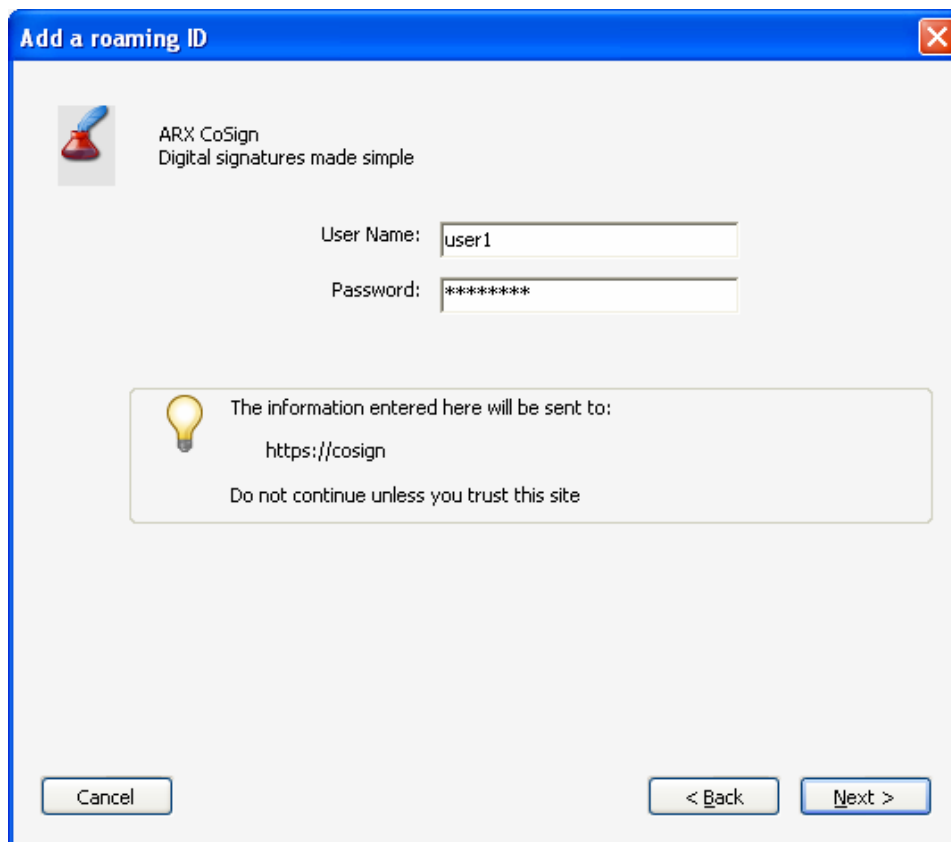
*Figure 83 Add a Roaming ID Dialog Box – Entering a Name and URL*

4. Enter the following information:
  - ◆ **Name** – Enter a name such as CoSign.
  - ◆ **URL** – Enter a value such as `https://cosign:8080/SAPIWS/assp.aspx`.

 **Note:** By default, the CoSign appliance is distributed with a temporary SSL certificate called `cosign`. You can generate your own SSL Server Certificate and name it with CoSign's DNS name; for example, `cosign.company.com`). If you would like use the CoSign temporary certificate, define an entry named `cosign` in your local hosts file, and specify the IP address of the CoSign appliance. The local hosts file is located in `/etc/hosts` in Unix platforms, and in `Windows\System32\drivers\etc\hosts` in Windows platforms.

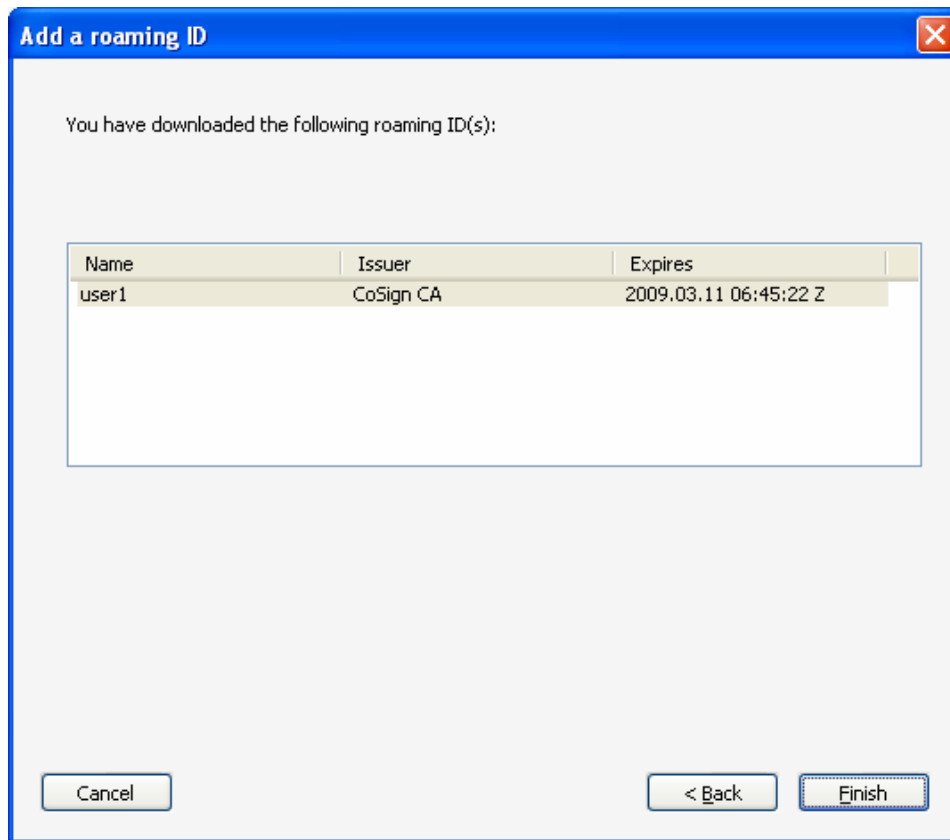
 **Note:** If you enroll for an SSL Server certificate, refer to the Managing the CoSign Appliance chapter in the CoSign Administrator Guide for instructions on how to upload the SSL Server certificate to the CoSign appliance.

5. Click **Next**. In the window that appears, enter a user ID and a password for authenticating to the CoSign appliance.



*Figure 84 Add a Roaming ID Dialog Box – Entering a User Name and Password*


6. Click **Next**. The final window appears, displaying the roaming ID settings, including the date when the User's certificate expires:



*Figure 85 Add a Roaming ID Dialog Box – Displaying Roaming ID Information*

7. Click **Finish**.

The selected certificate will be listed in any subsequent digital signature operation. If you choose this certificate, Adobe Reader/Adobe Acrobat will access the CoSign appliance for the digital signature operations. During this attempt, the user will be requested to supply a User ID and a password. The signature field that appears when using a roaming ID is identical to a regular signature field.

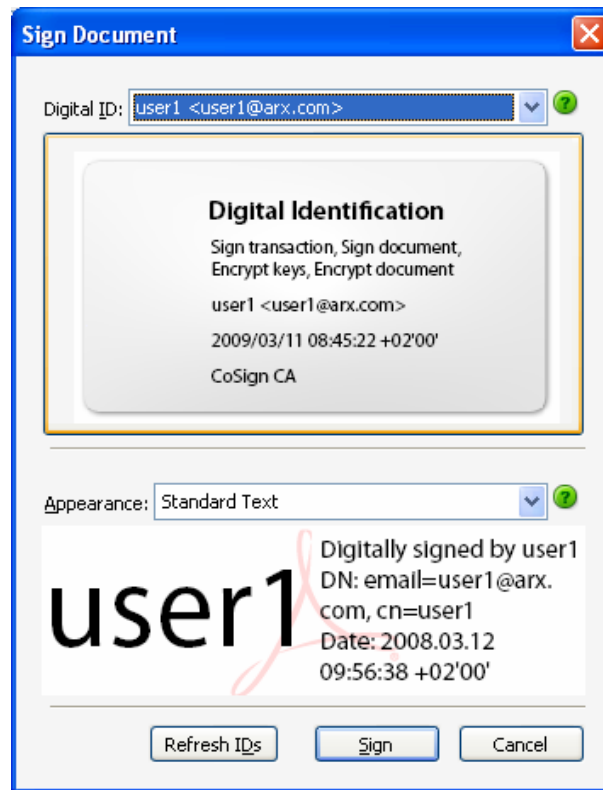
 **Note:** *The Roaming ID mechanism does not automatically support a graphical signature. To use a graphical signature, you must manually insert a graphical signature in Adobe Reader/Adobe Acrobat using the Appearance mechanism.*

## Signing a Signature Field that Contains a URL

If the user initiates a digital signature operation and the signature field already contains a URL for accessing the CoSign appliance, the user is requested to enter a User name and a password for accessing the CoSign appliance. This act will generate a roaming ID profile for the user, which the user can use for all subsequent signing operations.

### To sign a signature field that includes a URL:

1. When you initiate a digital signature operation and the signature field already contains a roaming ID profile, the following window appears.



*Figure 86 Sign Document Dialog Box – Displaying Roaming ID Information*

2. Select the username from the **Digital ID** drop-down list.
3. Select the appearance of the signature in the **Appearance** drop-down list. If you select an appearance that contains a graphical image, this graphical signature will be included in the digital signature.
4. Click **Sign**. A dialog box appears, requesting a password.
5. Enter the password corresponding to the username you selected.

Validating the digital signature is similar to validating a regular digital signature. Refer to [Validating CoSign Signatures Using Adobe Reader 6/7/8](#) for more information.



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## Chapter 6: OmniSign – Sign Any Printable Data, Anywhere

This chapter describes how to use OmniSign to sign any printable data from any application.

### Overview of OmniSign

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OmniSign enables you to sign any printable data from any application. OmniSign serves as a “virtual digital signature printer” to which files are sent, and from which they return converted into a signed PDF file.

The major benefits offered by OmniSign include:

- ◆ Sign any document by using the document’s application **File > Print** command. While CoSign comes with extensive third party application support for digital signatures, there are other applications that do not provide digital signatures support such as ERP systems, homegrown systems, and others. With OmniSign, any of these applications that support standard printing functionality can utilize OmniSign to add digital signatures to their documents.
- ◆ Sign existing PDF files without the need for expensive solutions, such as Adobe Acrobat Professional.

Before signing a file, you can set the size, location, and other attributes of the signature field. In addition, you can perform batch signing of files, run OmniSign in silent mode, and control the various signing parameters to best fit your needs.

The signing process consists of:

- ◆ Converting the file to PDF format. Refer to [Printing the File](#).
- ◆ Signing the PDF file. Refer to [The Signing Process](#).

Starting from CoSign client version 4.3 there is an option to incorporate an electronic signature into the PDF document. An electronic signature is a graphical image of an end-user’s handwritten signature. The end-user can enter his/her electronic signature using a graphical signature pad. This mode is very suitable for product purchase at a Point Of Sale. In this type of application, after the purchase form is filled, the customer inserts his/her electronic signature, and the local sales person digitally signs the whole document.

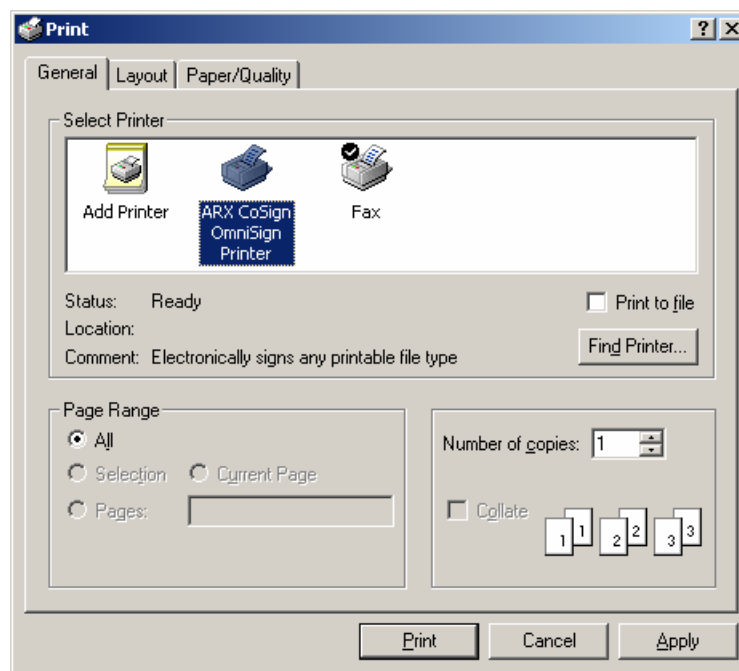
## Printing the File

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Signing any file format using OmniSign always starts with printing the file from within the file's application (unless the file is already in PDF format).

### To print the file:

1. Open the file in its application.
2. Select **File > Print**. The Print dialog box pops up. [Figure 87](#) displays the standard Print dialog box that appears in Word.
3. Select *ARX CoSign OmniSign Printer* as the printer.



*Figure 87 Selecting the ARX CoSign OmniSign Printer*

4. Change the print properties if desired.
5. Click **Print**.

Clicking **OK** triggers the PDF conversion process, during which a temporary file is created in the Windows Temp folder with the file name derived from the printing job name. The file content is then converted to PDF format and the OmniSign application is launched for the newly created PDF file, enabling you to sign the file (see [The Signing Process](#)).



## The Signing Process

---

The OmniSign window is used for viewing a PDF file, specifying the signature field location and size, signing the file, and optionally performing an additional post signing action. This process is controlled by the various parameters you can configure in the OmniSign window.

You can optionally add several electronic signatures prior to performing the digital signature operation. An electronic signature is a graphical image of an end-user's handwritten signature. Note that an electronic signature is only an image embedded into the document, and does not protect the document.

Among the settings you can configure are:

- ◆ Signature location (for either electronic or digital signatures)
- ◆ Signature width and height (for either electronic or digital signatures)
- ◆ Signature appearance (including invisible signature mode)
- ◆ The reason for signing
- ◆ Post signing action
- ◆ File saving options
- ◆ Silent mode
- ◆ Zoom

### Accessing OmniSign and Saving Settings

You can access OmniSign in either of the following ways:

- ◆ **Regular usage** – Running OmniSign to sign a specific document. This is done by either:
  - ◆ Printing any file using the *ARX CoSign OmniSign* printer.
  - ◆ Right-clicking a PDF file and selecting **Sign** from the pop-up menu.

In both cases, the OmniSign window appears ([Figure 88](#)), with the PDF file visible in the preview pane and a signature space holder in focus if the **Show Signature Field** option is checked. You can edit any of the OmniSign settings, and when you click **Sign** to sign the file, your settings are saved for future execution. Clicking **Close** exits the application without saving any changes.

- ◆ **Setup purposes** – Running OmniSign from the CoSign Control Panel. In this method, no file is being signed. From the **Start** menu select **Programs → ARX CoSign → CoSign Control Panel**. In the CoSign Control Panel select **OmniSign Settings** and the OmniSign window appears but with no file visible in the preview pane. You can edit any of the OmniSign settings, and then click **OK** to close the application and save your settings for future execution. Clicking **Cancel** exits the application without saving any changes.

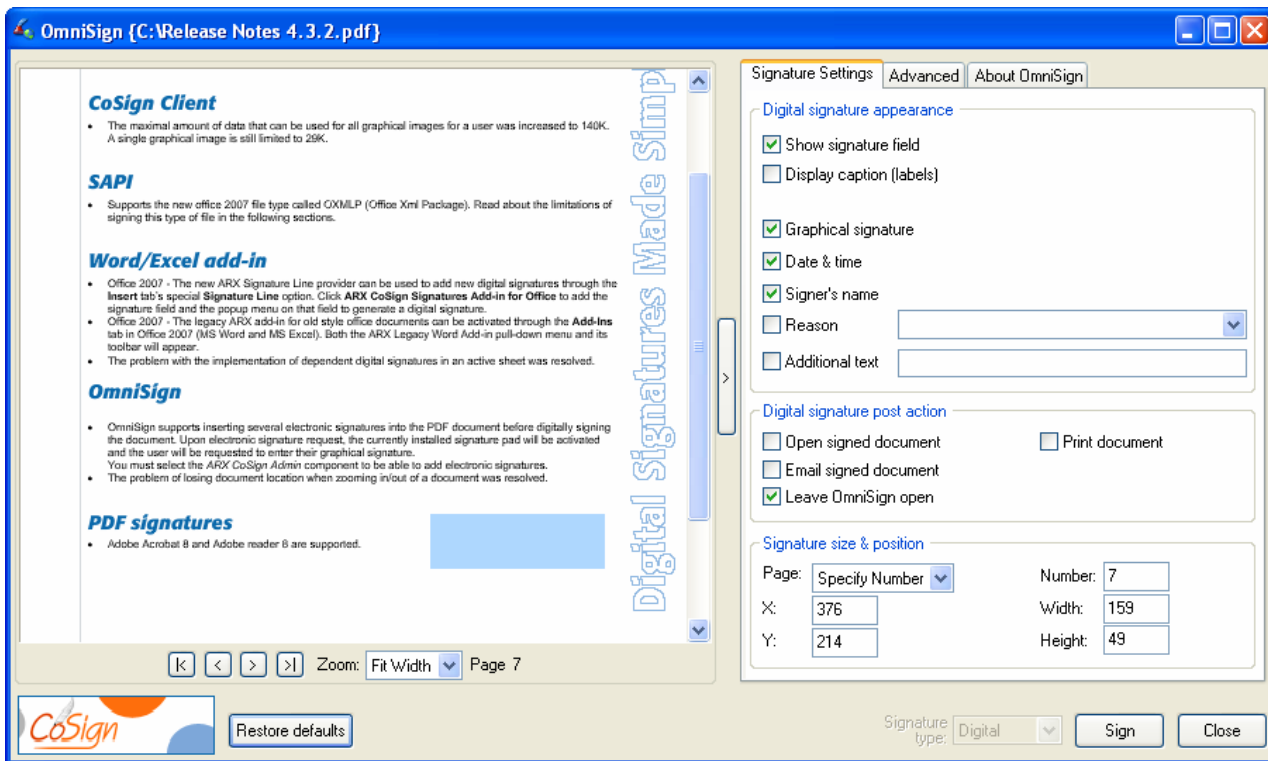


Figure 88 OmniSign Window - Signature Settings tab

The OmniSign window enables you to perform the following:

- ◆ **Sign the document** – Refer to [Performing the Digital Signature Operation](#). Note that you can perform an electronic signature prior to performing the digital signature (refer to [Performing an Electronic Signature Operation](#)).
- ◆ **Configure general signature settings** – Refer to [Configuring the Signature Settings](#).
- ◆ **Configure advanced settings** – Refer to [Configuring the Save Options](#).
- ◆ **Set file zoom and size** – Refer to [Setting the Zoom and Size](#).
- ◆ **Restore the default settings** – Refer to [Restoring Default Settings](#).



**Note:** Starting from version 4.3 you can minimize the Settings panel by clicking the **Hide/Show Settings** button. To restore the Settings panel, click the **Hide/Show Settings** button again.

## Performing an Electronic Signature Operation

If you wish to view or change any OmniSign settings before signing, refer to [Configuring the Signature Settings](#), [Configuring the Save Options](#), and [Setting the Zoom and Size](#).



**Note:** Make sure that the **Allow Electronic Signatures** option is set in the **Signature** tab, accessed by editing the Profiles list as described in *OmniSign – Profiles*.

When you finish setting all desired signing and saving parameters, you can perform the electronic signing operation by setting **Signature Type** to **Electronic** and clicking **Sign** in the OmniSign window (*Figure 88*).

It is required to attach a pad to the workstation (refer to [Chapter 2: Deploying the CoSign Client](#) for more information on which pads can be used). It is also required that the CoSign client be installed with the ARX CoSign admin component which enables using a signature pad.

Clicking **Sign** performs the following:

1. All settings that were changed by the user are stored for future execution.
2. The end user is prompted to enter a signature using the currently connected signature pad.

If the pad includes a display, the graphical signature appears on both the display and the PC.



*Figure 6-89 Electronic Signing using a Signature Pad*

3. A new electronic signature image is created according to the signature field settings.

You can add an electronic signature several times before digitally signing the PDF document.

## Performing the Digital Signature Operation


If you wish to view or change any OmniSign settings before signing, refer to [Configuring the Signature Settings](#), [Configuring the Save Options](#), and [Setting the Zoom and Size](#).


When you finish setting all desired signing and saving parameters, you can perform the signing operation by setting **Signature Type** to **Digital** and clicking **Sign** in the OmniSign window (*Figure 88*).

Clicking **Sign** performs the following:

1. All settings that were changed by the user are stored for future execution.
2. A new signature field is created according to the signature field settings.
3. A signing certificate is chosen. If there is a single certificate it is automatically chosen. Otherwise, a **Select Certificate** dialog box pops up for selecting the desired certificate from the certificates list.

4. If the end user has more than one graphical image inside CoSign, and you specify that the graphical image is part of the signature, a graphical signature selection dialog box pops up. After selecting the desired graphical image click **OK**.
5. The document is signed.
6. If no post-signing operation is defined, the OmniSign application closes.  
If a post signing operation is set, it is executed right after the document is signed. If either **Open Signed Document** or **Email Signed Document** were specified, the relevant application is launched and OmniSign closes without waiting for the post signing operation to complete.

 **Note:** If OmniSign settings were changed, clicking **Sign** stores the new settings even if the signing operation fails for any reason.

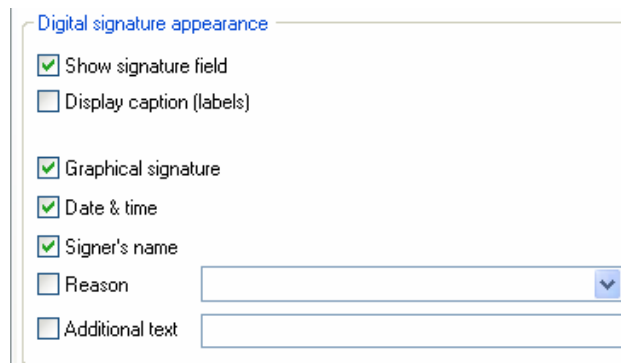
 **Note:** When the digital signature is viewed using Adobe Acrobat 6/7/8 or Acrobat Reader 6/7/8, a message displays to inform you that the time stamping of the digital signature is taken from the local computer, even though the actual time is taken from the CoSign appliance.

## Configuring the Signature Settings

The Signature settings tab contains the common parameters that influence the signature appearance and the behavior of the application. It includes parameters for the following:

- ◆ [Configuring the Signature Appearance.](#)
- ◆ [Configuring a Post Signing Action.](#)
- ◆ [Configuring the Signature Field Size and Position.](#)

### Configuring the Signature Appearance



Digital signature appearance

- Show signature field
- Display caption (labels)
- Graphical signature
- Date & time
- Signer's name
- Reason
- Additional text

*Figure 90 Signature Appearance*

The *Signature Appearance* includes the following parameters:

- ◆ **Show signature field** – Indicates whether the signature field will be visible. When this box is unchecked, the signature appearance and the signature size and position settings are disabled, and the signature rectangle (shown in [Figure 88](#)) is hidden.

- ◆ **Display caption (labels)** – Indicates whether to use captions such as Date, Reason, Signed by, for the fields that will be displayed in the signature field.
- ◆ **Graphical signature** – Indicates whether the graphical signature (if it exists in CoSign) will be displayed in the signature field.
- ◆ **Date & time** – Indicates whether the date and time of signing will be displayed in the signature field.
- ◆ **Signer's name** – Indicates whether the signer's name will be displayed in the signature field. If this box is not checked but there is no graphical image in CoSign, this setting will be overridden and the signer's name **will** be displayed in the signature field.
- ◆ **Reason** – Indicates whether the reason for signing will be displayed in the signature field.
- ◆ **Reason for signing** – The reason that is attached to the signature field and can be seen in the signature pane when the file is opened with Adobe Reader. If the **Reason** box is checked, the reason is also displayed in the signature field on the document itself. You can select a reason from the list or enter a new one. The list is defined in the OmniSign section of the CoSign client configuration utility. Refer to [Setting OmniSign Configuration](#).
- ◆ **Additional Text** – Indicates whether there will be additional text displayed in the signature field. You can display the title of the signer in this text.
- ◆ **Additional Text value** – The actual text of the additional text will be put in this text field.

### *Configuring a Post Signing Action*

Digital signature post action

Open signed document       Print document

Email signed document

Leave OmniSign open

*Figure 91 Signature Post Action*

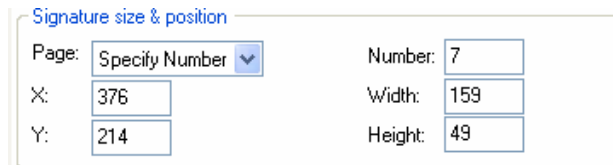
Post-signing actions are actions that are performed on the signed file immediately after it is signed. You can select one action at most. The OmniSign application does not wait for the action to terminate, but launches it and exits, except in the case of **Leave OmniSign Open**. The Signature Post Actions include:

- ◆ **Open signed document** – Opens the signed file with the PDF file type associated application (usually, Adobe Reader).
- ◆ **Email signed document** – Opens a new mail message with the signed file already attached, and the subject being the signed file name.
- ◆ **Leave OmniSign open** – Reopens the signed file in OmniSign and does not close the application.
- ◆ **Print document** – Sends the document to the printer after it is signed.

## Configuring the Signature Field Size and Position

You can specify the signature field's size and position in either of two ways:

- ◆ Browse the document inside the OmniSign window and use the mouse to specify a rectangle for the signature field. The values in the **Signature size & position** fields are automatically updated accordingly.
- ◆ Manually enter the values in the **Signature size & position** section. The parameters in the section include:





Signature size & position

Page:	Specify Number	Number:	7
X:	376	Width:	159
Y:	214	Height:	49

*Figure 92 Signature Size & Position*

- ◆ **Page** – Specifies the page in which to create the signature field. The available options are **First page**, **Last page**, and **Specify Number**. When **Specify Number** is selected, enter the page number in the **Number** field.
- ◆ **X** – The horizontal distance in Adobe pixel units of the signature field's bottom left corner from the document's {0, 0} point, usually (but not always) the bottom left corner of the document.
- ◆ **Y** – The vertical distance in Adobe pixel units of the signature field's bottom left corner from the document's {0, 0} point, usually (but not always) the bottom left corner of the document.
- ◆ **Number** – The page where the signature field is added. This field is visible only when **Page** is set to **Specify Number**.
- ◆ **Width** – The width in Adobe pixel units of the signature field.
- ◆ **Height** – The height in Adobe pixel units of the signature field.

 **Note:** Any change in the Signature size & position parameters immediately affects the location and size of the signature rectangle displayed in the view pane of the OmniSign window.

 **Note:** Different settings are kept for digital signatures and electronic signatures.

## Configuring Advanced Settings

In the advanced settings tab you can:

- ◆ **Configure the date and time format** – Refer to [Configuring Date and Time Format](#).
- ◆ **Configure the Save settings** – Refer to [Configuring the Save Options](#).
- ◆ **Configure additional settings** – Refer to [Configuring Additional OmniSign Parameters](#).


### Configuring Date and Time Format

If the date and time are displayed in the signature field (that is, the **Date & Time** box is checked in the **Signature Appearance**), you can set the date and time format as follows:

The screenshot shows a dialog box titled "Date & time format". It contains two dropdown menus. The "Date" dropdown is set to "MMM d yyyy" and the "Time" dropdown is set to "h:mm tt". Below these is a checkbox labeled "Display GMT offset" which is currently unchecked.

Figure 93 Date & Time Format

- ◆ **Date** – The date format. You can select a format from the drop-down list or create a new one. See [Figure 36](#) for an explanation of the date format notation.
- ◆ **Time** – The time format. You can select a format from the drop-down list or create a new one. See [Figure 36](#) for an explanation of the time format notation.
- ◆ **Display GMT offset** – Indicates whether to display the time zone of the signature operation in relation to GMT.

 **Note:** You can modify the format of the date and time strings so that the displayed date and time contain some additional fixed text. Take care not to change the letters that identify the year (**y**), month (**m**), day (**d**), hour (**h**), and minutes (**m**), even if these letters are different in your native language.


### Configuring the Save Options

The screenshot shows a dialog box titled "Saving options". It contains a text field for "Default folder" with the value "{Save in original folder}" and a "Browse..." button. Below this are two checkboxes: "Always ask where to save" (checked) and "Delete original" (unchecked).

Figure 94 Saving Options

The following file save options are available:

- ◆ **Default folder** – Specifies the folder where the signed PDF file will be stored. The value of this field is ignored in the following cases:
  - ◆ If the field is empty.
  - ◆ If **Always ask where to save** is checked, and OmniSign is not running in silent mode.

 **Note:** The **Default Folder** field is used to specify only the folder name, while the file name itself is taken from the printing job name. In order to set both the folder and file names, check the **Always Ask Where To Save** box and enter both the folder and file names in the **Save As** dialog box that will pop up.

- ◆ **Always ask where to save** – If this box is checked and OmniSign is not running in silent mode, a **Save As** dialog pops up after you click **Sign**, enabling you to specify where to store the signed file.



**Note:** If you do not specify a destination for the signed file, OmniSign will overwrite the source PDF file with the signed PDF file.

- ◆ **Delete original** – This option is available only when signing existing PDF files, and it indicates whether to delete the source PDF file.
- ◆ **Delete intermediate file** – This option appears when OmniSign was launched by a printing job. It is always set to true to indicate that the intermediate PDF file will be deleted. If no default folder is defined, OmniSign automatically checks **Always ask where to save**.

### Configuring Additional OmniSign Parameters

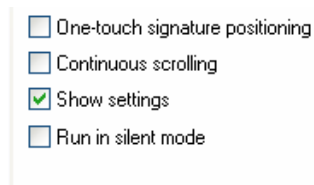


Figure 95 Additional OmniSign Parameters

You can configure the following additional OmniSign configuration parameters:

- ◆ **One-touch signature positioning** – If this option is selected, a digital signature field appears with a fixed width and height, based on the current width and height. This functionality is useful for cases where there are fixed sized signature fields, and the user need not set the size of the signature every time he/she wishes to sign.
- ◆ **Continuous scrolling** – If this option is selected, the whole PDF document is displayed in the left pane and you can scroll through the whole document. If this mode is not selected, you can see one page at a time.
- ◆ **Show settings** – If this option is not selected, you will not be able to view the whole parameters section (right pane). This is useful for cases in which you do not want the user to modify parameters accidentally. To turn this parameter back on, select **OmniSign Settings** in the CoSign Control Panel.
- ◆ **Run in Silent Mode** – OmniSign can run either in GUI mode or in silent mode, as follows:
  - ◆ *In GUI mode*, the OmniSign window ([Figure 88](#)) is visible, and you can view the PDF file, change settings if desired, and then you must click **Sign** to perform the signing operation.

OmniSign features that can be used only when running in GUI mode are those that require user interaction; that is, they cause a dialog box to pop up. These include:

- ◆ Working with more than one certificate in the store, since it causes a **Select Certificate** dialog box to pop up. If OmniSign is run in silent mode and more than one certificate is available, the operation fails.



- ◆ The **Always Ask Where To Save** feature. In silent mode this value is ignored.
- ◆ *In silent mode*, the OmniSign window does not appear. Whether you print a file using the *ARX CoSign OmniSign* printer and click **OK**, or right click a PDF and select **Sign**, no interface is visible. OmniSign runs silently in the background, with the settings that were set the last time OmniSign was run with a GUI.

Only silent mode offers the advantage of running OmniSign for multiple files using wildcards (such as `c:\tmp\*.pdf`).

To turn off Silent mode, activate the CoSign Control Panel by running **Start → Programs → ARX CoSign → CoSign Control Panel**. Activate the *OmniSign Settings* application and then uncheck **Run in Silent Mode** in the **Advanced** tab.

## About OmniSign Tab

The **About OmniSign** tab displays information about the current OmniSign version and a link to ARX web site.

## Setting the Zoom and Size

You can set the following in the OmniSign window:

- ◆ **Zoom** – Specify the zoom setting by selecting an option from the drop-down list. The view of the file is automatically adjusted.
- ◆ **Size** – You can change the OmniSign application window size using either the maximize/restore button or by dragging the application's frame. The preview pane's size changes accordingly. Note that there is a minimum height and width.

## Restoring Default Settings

OmniSign stores parameter values changed by the user, under the Current User settings in the registry. If you wish to restore default settings, click **Restore defaults** (see [Figure 88](#)).

When you click **Restore defaults**, OmniSign performs the following:

1. Removes all user-defined values from the registry.  
If no value is then defined under the user registry for a certain parameter, OmniSign looks for this value in the local machine definitions (refer to [Setting OmniSign Configuration](#) for more details). If no value is found, it uses a default value.
2. Immediately updates the values in its dialog boxes. These settings apply whether you click **Sign** or **Cancel**.

## Signing Existing PDF Files

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The OmniSign application can be used to sign existing PDF files without installing and running Adobe Acrobat.

### To sign a PDF file using OmniSign:

1. Run Windows Explorer.
2. Right click the PDF file you wish to sign.
3. Select **Sign** from the pop-up menu. The OmniSign window appears for the desired file.
4. Set the signature settings as desired, and click **Sign**.

## Batch Signing

---

The OmniSign application can also be used for signing multiple files in unattended mode.

### To run OmniSign for batch signing:

1. Run **Start → Programs → ARX CoSign → CoSign Control Panel**. In the CoSign Control Panel select **OmniSign settings**. The OmniSign window appears.
2. Configure the signature settings you wish to apply to all the files to be signed.
3. Turn on silent mode by checking the **Run in Silent Mode** box in the Advanced Settings group of the OmniSign window.
4. If you want the signed files to be stored in a different folder than the one they are stored in before signing, specify the folder in the **Default folder** field ([Figure 94](#)).
5. Click **OK** to close the OmniSign window.
6. Run one or more instances of `OmniSign.exe` (either in parallel or serialized) with a single parameter that represents a group of files using wildcards (such as `c:\tmp\*.pdf`).

---

## Chapter 7: The ARFileSign Utility

One of the CoSign client components is SAPI. This component enables programmers to digitally sign any PDF, Tiff, Word/Excel 2007, or Word 2003 file. For more information about SAPI, see the *CoSign Programmer Guide (SAPI)*. You can also use the `arfilesign.exe` command line utility to sign those file types.

This chapter describes the `arfilesign.exe` utility. Keep in mind that the `arfilesign.exe` utility is your only option for signing Tiff files when code development is not an option.

### Overview

---

The `arfilesign.exe` command-line utility is installed under `Program Files\ARX\ARX Signature API`. This utility enables you to sign and validate signatures of Tiff/PDF/Office 2007/Word 2003 files.

The `arfilesign.exe` utility signs a document in automatic batch processing, without requiring you to open MS Word or Adobe Acrobat and to sign the documents manually. The utility accepts a file name and a set of options, and performs a signature operation on the file.

Signing multiple files is possible by providing a wildcard pattern rather than a single file name.

The `arfilesign.exe` utility can be used for other operations, such as creating a signature field or performing verification.

### Signing TIFF Files

---

The Cosign client supports digital signatures in Tiff documents. This enables you to:

- ◆ *Easily sign a Tiff document.* The signature operation optionally attaches a first page that includes the signer's name, the signature date, and the text "Powered By CoSign".
- ◆ *Validate the signature on a Tiff document.* Validation assures you that the document was not modified after it was signed, and that a trusted CA approves the signer.

### Using ARFileSign for Tiff Files

Note the following when using `arfilesign.exe` for Tiff Files:

- ◆ You can have multiple non visible signatures in a TIFF file, or you can define the first signature as Visible, and the rest as Non Visible.
- ◆ The signature operation optionally attaches a first page that includes the signer's name, the signature date, and the text "Powered By CoSign".

- ◆ The digital signature is embedded inside a special Tiff tag whose identity number is 50685.

## Signing Other Files

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### Using ARFileSign for Adobe Files

The signatures performed by the `arfilesign.exe` utility upon a PDF file are compatible with Adobe 6/7/8 (Acrobat and Reader). You can therefore validate the signatures using Adobe 6/7/8 (Acrobat and Reader).

If you wish to sign a PDF file, it is not necessary to have any Adobe product installed on the machine running the `arfilesign.exe` utility.

### Using ARFileSign for Word 2003 Files

If you wish to sign a Word file, you must have Microsoft Word installed in the machine that is running the `arfilesign.exe` utility.

To sign Word files, contact ARX for additional directions.

### Using ARFileSign for Word/Excel 2007 Files

If you wish to sign a Word /Excel 2007 file, it is not necessary to install Office 2007 on the client machine. However, you must have .NET framework version 3 installed on the client machine.

Note that only the signing or clearing of existing fields is supported. To create a digital signature field, you must therefore use Office 2007 with either the Microsoft Signature Line provider or the ARX Signature Line Provider.

Office 2007 files are marked as OXMLP (Office Xml Package).

## Executing arfilesign.exe

---

The `arfilesign.exe` utility is executed as follows:

```
arfilesign.exe -fn <file-name> [options]
```

where **file-name** is the name of the file on which the signature field operation is performed. To sign multiple files, provide a file mask instead of a file name (for example, `C:\*.tif`).

### The arfilesign.exe options

- ◆ **[-op <operation number>]** – Supply one of the following numbers to indicate the required operation:
  - 1 Create field
  - 2 Sign field (creates a field if needed)
  - 3 Verify field
  - 4 Clear field
  - 5 Remove field
  - 6 List fields
  - 7 Create a field and Sign it in one operation
- The default operation number is 2.
- ◆ **[-ft <file type>]** – Indicate one of the following file types: doc, OXMLP, pdf or tif. The default value is set according to the file extension.
- ◆ **[-v <Visible/Invisible>]** – Visible or Invisible signatures (default: Visible). In the case of a Tiff file, specify whether the signature is Visible or Non Visible. In a Tiff file only the first digital signature may be Visible.
- ◆ **[-p <page number>]** – The number of the page in which the signature field will be created (default: 1). If -1 is provided, the signature is placed on the last page. This option is not available for Tiff files.
- ◆ **[-x <x coordinate>]** – The signature field's left x coordinate (default: 100). This option is not available for Tiff files.
- ◆ **[-y <y coordinate>]** – The signature field's bottom y coordinate (default: 100). This option is not available for Tiff files.
- ◆ **[-w <width>]** – The width of the signature field (default: 200). This option is not available for Tiff files.
- ◆ **[-h <height>]** – The height of the signature field (default: 100). This option is not available for Tiff files.
- ◆ **[-sff <flags value>]** – Reserved. Do not use this flag.
- ◆ **[-r <reason text>]** – The reason for signing, or the reason label when creating fields.
- ◆ **[-sfi <field index>]** – The signature field index. If -sfi is not provided, the first field that matches the operation is used. This parameter is not available for Tiff files.

- ◆ [-sfn <field name>] – The signature field name (an alternative to **-sfi**). If **-sfn** is not provided, the first field that matches the operation is used. This parameter is not available for Tiff files.
- ◆ [-ser <certificate serial number>] – The certificate serial number. The utility will use this certificate and its relevant Private Key for the digital signature operation.
- ◆ [-grn <graphical signature name>] – The utility uses the specified graphical image for the digital signature operation.  
If the user has more than one graphical image and this option is not used, there will be no graphical image in the Tiff signature.
- ◆ [-d <dependency mode>] – Dependent or Independent Signature (default: Independent). For Tiff files this parameter must be defined as Dependent.
- ◆ [-am <appearance mask>] – Defines the fields that will appear in the digital signature box (default: Image, Name, Time). Combine any of the following: Image, Name, Time, Reason, separated by commas, or use the value: None. This parameter is not available for Tiff files.
- ◆ [-lm <labels mask>] – Defines whether a label will be presented in the digital signature (default: None). Combine any of the following: Name, Time, Reason, separated by commas, or use the value: None.
- ◆ [-tf <time format>] – Time format of the displayed signature (default: "h:mm tt"). For all possible values see the time formats in the screen capture appearing in [Signature Default Settings – Date and Time Format](#).
- ◆ [-df <date format>] – Date format of the displayed signature (default: "MMM d yyyy"). For all possible values see the date formats in the screen capture appearing in [Signature Default Settings – Date and Time Format](#).
- ◆ [-to <time offset>] – Whether to show signature time offset: GMT or None (default: None).
- ◆ [-c] – Certificate chain flags. If this parameter is set, the digital signature will contain all certificates until the ROOT certificate, inclusive.
- ◆ [-cfg] – For further information on using this parameter, please refer to the *CoSign Programmer Guide (SAPI)* or contact ARX.
- ◆ [-flg] – For further information on using this parameter, please refer to the *CoSign Programmer Guide (SAPI)* or contact ARX.
- ◆ [-uid] – The user ID of the user performing the signature operation.
- ◆ [-pwd] – The password of the user performing the signature operation.
- ◆ [-dom] –The Active Directory or Novell NDS domain of the user performing the signature operation.
- ◆ [-pfs] – The *Prompt For Sign* password in cases where it is required. Note that if the password is identical to the one supplied in [-pwd] then it is not required.
- ◆ [-cf] – Additional custom fields. These fields enable you to attach additional information to a newly generated field. Each custom field contains an ID, type, and value. The

available types include, for example, 1 – integer, 2 – string. For a full description refer to the *SAPI Programmer Guide*.

Format the input as follows:

<ID1>, <Type1>, <value1>, <ID2>, <Type2>, <Value2>, ...





---

## Chapter 8: Signing WordPerfect Documents

The CoSign client supports digital signatures in WordPerfect documents. This enables you to:

- ◆ Easily sign a WordPerfect document.



**Note:** *A WordPerfect document can only contain one signature.*



**Note:** *Any attempt to sign a previously signed document erases the previous digital signature. A digital signature is also erased if the document is modified.*

- ◆ **Validate the signature on a WordPerfect document** – Validation assures you that the document was not modified after it was signed, and that the signer is approved by a trusted CA.

This chapter describes how to generate and validate digital signatures using WordPerfect.

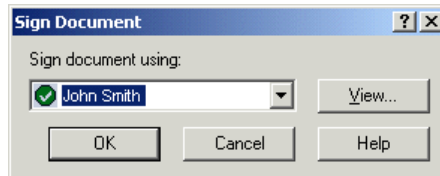
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### Signing a WordPerfect Document


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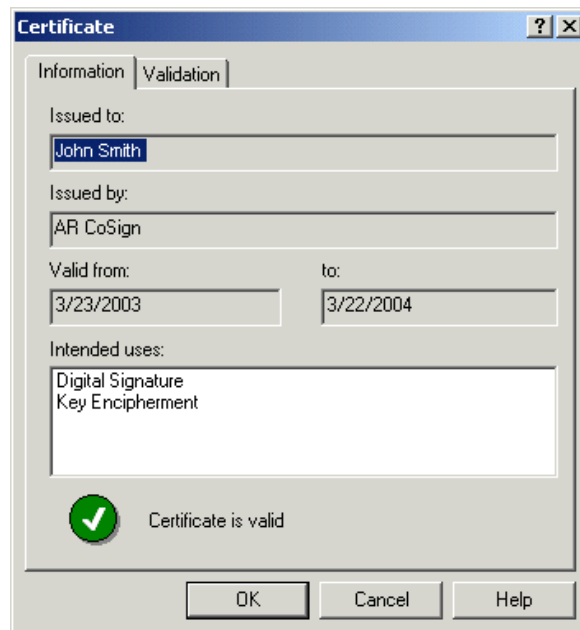
**To digitally sign a WordPerfect document:**

1. In WordPerfect, open the document you wish to sign.
2. Open the **File** menu and select **Signature → Sign Document**. The *Sign Document* dialog box appears ([Figure 96](#)).



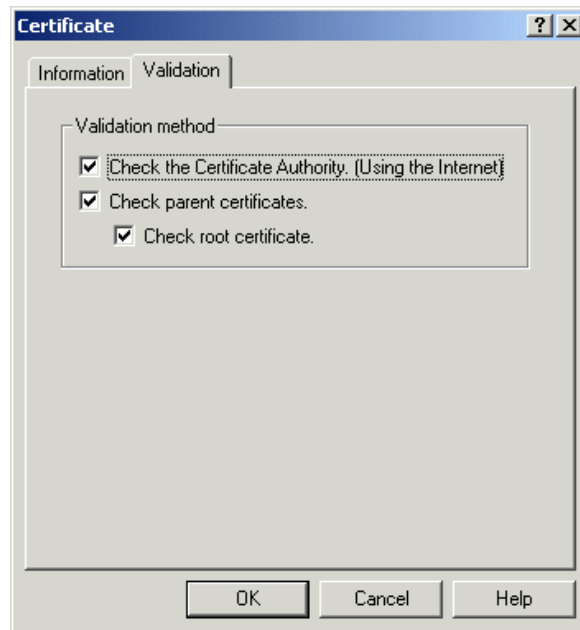
*Figure 96 Sign Document Dialog Box*

3. Select the desired certificate from the drop-down list. The certificate is marked with a .
4. To view more information about the selected certificate, click **View**. The *Certificate* dialog box appears. The Information tab displays the contents of the certificate, including the CA Name of the CoSign appliance that issued the certificate, the certificate's period of validity, and whether the certificate is currently valid.



*Figure 97 Certificate Dialog Box – Information Tab*


5. Select the **Validation** tab.




*Figure 98 Certificate Dialog Box – Validation Tab*


6. Select any of the following certificate validation options:
  - ◆ **Check the Certificate Authority (Using the Internet)** – Checks the CRL of the certificate authority.
  - ◆ **Check parent certificates** – Checks the chain of certificates from the end user certificate to the root certificate.

- ◆ **Check root certificate** – Checks the root certificate.

 **Note:** For more information on WordPerfect validation options, refer to <http://Corel.com>.

7. Click **OK** to save your changes or **Cancel** to return to the *Sign Document* dialog box.
8. In the *Sign Document* dialog box, click **OK** to digitally sign the WordPerfect document with the selected certificate.

 **Note:** When you add a digital signature to a WordPerfect document, the document is not automatically saved. Make sure to save the document after adding your signature, since the save operation will actually create the signature.

 **Note:** The current version of CoSign does not support graphical signatures in WordPerfect documents.

## Modifying a Signed WordPerfect Document

---

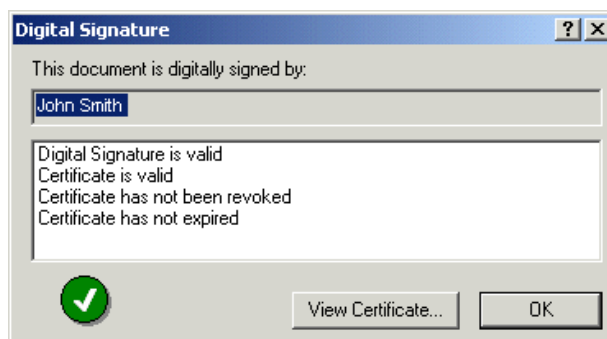
Once a document is signed, you cannot modify the document without deleting the signature. If you modify a signed document, you must sign the document again.

## Validating Signatures in WordPerfect Documents

---

To validate a signature attached to a document:

1. Open the document in WordPerfect.
2. Open the **File** menu and select **Signature** → **View Signature**. The *Digital Signature* dialog box appears.



*Figure 99 Digital Signature Dialog Box – Valid Signature*

This dialog box indicates if there is any problem with the digital signature or the certificate. If the certificate is not trusted, the *Digital Signature* dialog box may appear as follows:

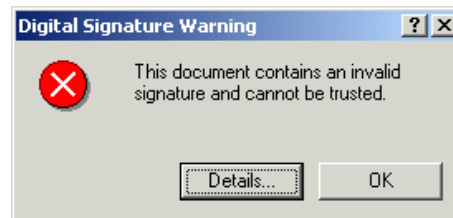


*Figure 100 Digital Signature Dialog Box – Certificate Not Trusted*

3. Click **View Certificate** to view more information about the certificate. The *Certificate* dialog box appears (refer to [Figure 97](#) and [Figure 98](#)).

## Viewing Details about Invalid Signatures

If someone tampered with the document after the document was signed, the following message appears upon opening the document:



*Figure 101 Digital Signature Warning Dialog Box*

**To view details about the invalid signature:**

- ◆ Click **Details**.

The *Digital Signature* dialog box appears, displaying information about the invalid signature.

## Validating CoSign Signatures without CoSign

If you are not using CoSign, you can still validate signatures that were attached using CoSign. This is useful if you receive documents from a company or organization that uses CoSign internally.

**To validate signatures without using CoSign:**

1. Obtain the ROOT CA Certificate from a reliable representative of the organization using CoSign.
2. Install the organization's ROOT CA Certificate (refer to [Installing the ROOT Certificate](#)).
3. Validate the signature. Refer to [Validating Signatures in WordPerfect Documents](#).

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## Chapter 9: Signing Outlook Emails

This chapter describes how to generate and validate digital signatures using Microsoft Outlook and Microsoft Outlook Express.

### Signing Outlook Emails

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Microsoft Outlook includes tools for sending and receiving digitally signed emails. CoSign integrates with Outlook by managing your public and private keys and certificates. This enables you to easily sign emails in Outlook.

Before you can send signed email messages, you must configure Outlook to associate your certificate with your email account.



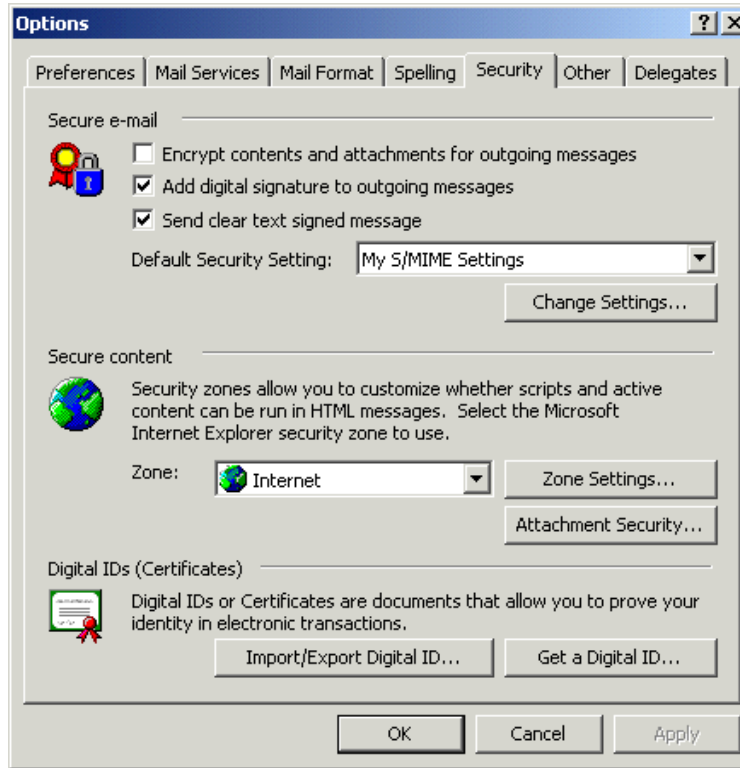
**Note:** *The procedures described in this section refer to Microsoft Office 2000. Dialog boxes and other user interface elements may appear slightly different in Microsoft Office XP/Office 2003/Office 2007.*

### Configuring Outlook

**To configure Outlook to work with CoSign:**

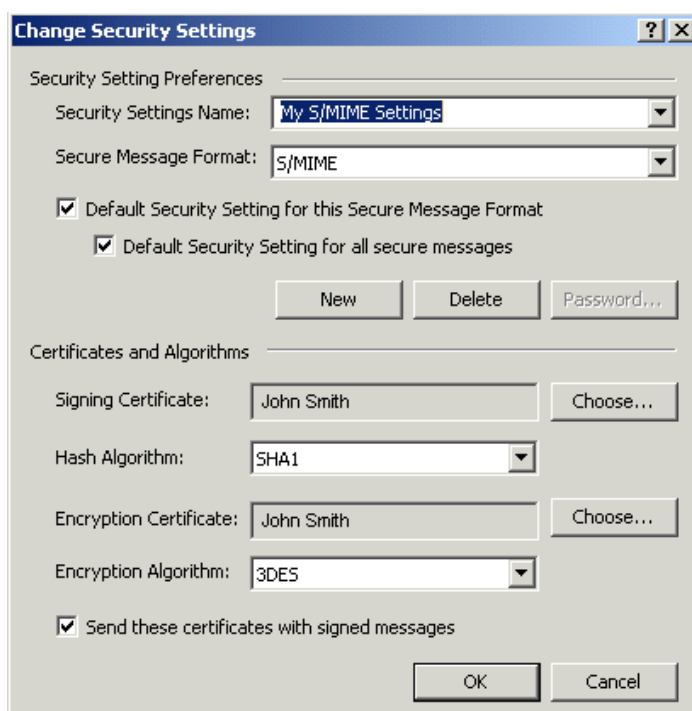
1. Open Outlook.
2. Open the **Tools** menu and select **Options**. The *Options* dialog box appears.

3. Select the **Security** tab.



*Figure 102 Options – Security*

4. For additional settings options, click **Change Settings**. The *Change Security Settings* dialog box appears.



*Figure 103 Change Security Settings*

5. In the Certificates and Algorithms section, click **Choose** to select a signing certificate. The *Select Certificate* dialog box appears.
6. Select the certificate you want to use for signing your emails, and click **OK**. You are returned to the **Security** tab of the *Options* dialog box.
7. To automatically sign all outgoing messages, check **Add digital signature to outgoing messages** on the **Security** tab of the *Options* dialog box.
8. Click **OK**.

## Sending Signed Email Messages

### To sign all your email messages:

1. In Outlook, open the **Tools** menu and select **Options**. The *Options* dialog box appears (*Figure 102*).
2. Select the **Security** tab.
3. Check **Add digital signature to outgoing messages** on the **Security** tab of the *Options* dialog box.

### To sign a specific email message:

1. On the Outlook toolbar, click **Options**. The *Message Options* dialog box appears.

2. Check **Add digital signature to outgoing message**, and click **Close**.
3. Click **Send** to send the message.

## Receiving Signed Email Messages

Using Outlook, you can validate the authenticity of any signed email message you receive. This assures you that the message is indeed from the stated sender and that the message has not been tampered with since it was sent.


When you receive a signed email message, Outlook displays one of the following icons in the message window:



The digital signature is valid. Click this icon to view the signature's details.



The digital signature is invalid. Click this icon to view the reason(s) this signature is invalid.

You may also see the  icon to the left of the message in the inbox. This icon indicates that the sender checked the **Send clear text signed message** option (refer to [Figure 102](#)).



**Note:** To properly validate the certificate of the sender, install the ROOT CA certificate of the sender's organization. For information on installing the ROOT CA certificate, refer to [Installing the ROOT Certificate](#).



**Note:** If you are using Microsoft Web Mail of Microsoft Exchange 2000, you cannot view the content of the signed email you receive. However, you can view the content of a signed email in Web Mail of Microsoft Exchange 2003.



**Note:** In some versions of Outlook (for example, Outlook XP), Outlook attempts to validate that the signer's certificate has not been revoked. To do this, Outlook attempts to connect to the Active Directory through the network and download a CRL (via LDAP or HTTP protocol). This network activity may be time consuming or blocked by firewalls.

## Installing the ROOT Certificate

For information on installing the ROOT certificate, refer to [Installing the ROOT Certificate](#).

## Signing Outlook Express Emails

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Microsoft Outlook Express includes tools for sending and receiving digitally signed emails. CoSign integrates with Outlook Express by managing your public and private keys and certificates. This enables you to easily sign emails in Outlook Express.

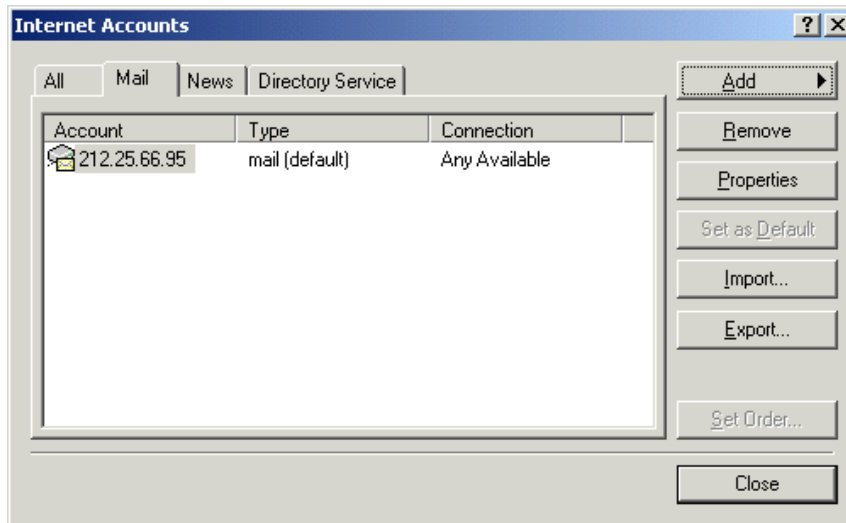
Before sending signed email messages using Outlook Express, you must configure Outlook Express to associate your certificate with your email account.



## Configuring Outlook Express

To configure Outlook Express:

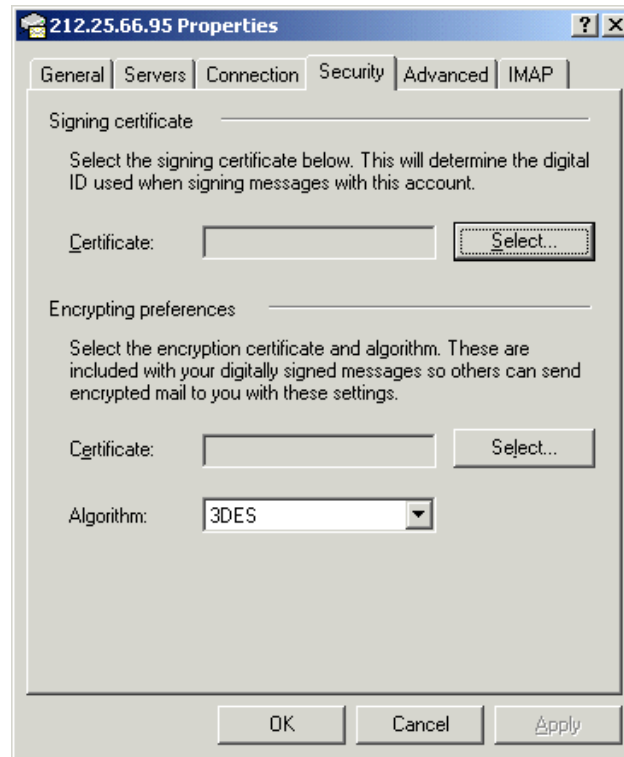
1. Open Outlook Express.
2. Open the **Tools** menu and select **Accounts**. The *Internet Accounts* dialog box appears.
3. Select the **Mail** tab.



*Figure 104 Internet Accounts – Mail*


4. Select the email account with which you want to use your certificate, and click **Properties**. The *Account Properties* dialog box appears.

5. Select the **Security** tab.



*Figure 105 Account Properties – Security*

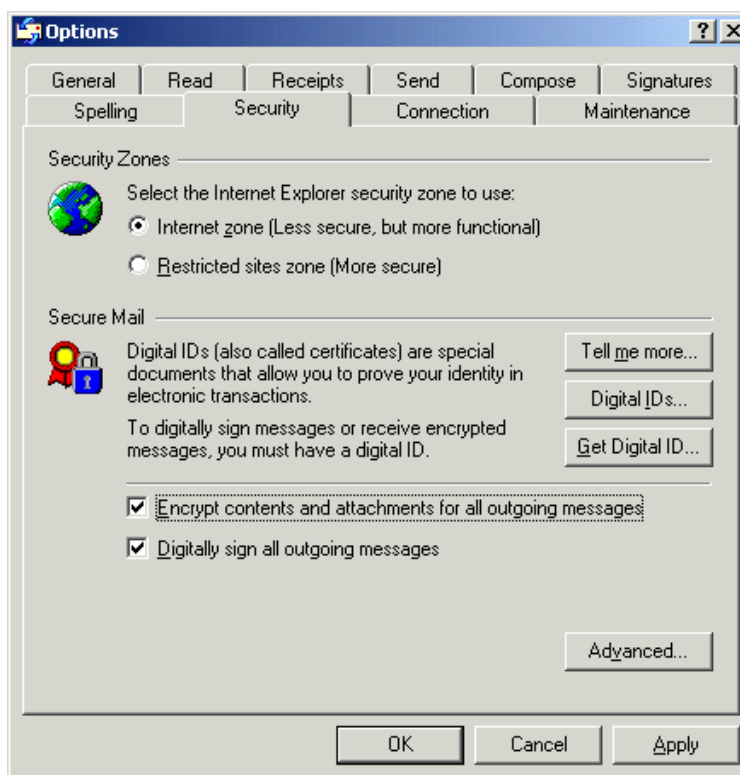
6. In the **Signing certificate** section of the dialog box, click **Select**. The *Select Default Account Digital ID* dialog box appears.
7. Select the certificate you want to use, and click **OK**.

 **Note:** Only certificates with the same email address as the selected account are displayed.

## Sending Signed Email Messages

**To sign all your email messages:**


1. In Outlook Express, open the **Tools** menu and select **Options**. The *Options* dialog box appears.
2. Select the **Security** tab.



*Figure 106 Options – Security*


3. Check **Digitally sign all outgoing messages**, and click **OK**.

#### To sign a specific email message:

1. On the New Message toolbar, click .
2. Click **Send** to send the message.

## Receiving Signed Email Messages

You can validate the authenticity of any signed email message you receive. This assures you that the message is indeed from the stated sender and that the message has not been tampered with since it was sent.

When you receive a signed email, the email includes a signed email icon . If the signature is invalid for any reason, Outlook Express displays a security warning indicating the problem.

## Distributing the ROOT Certificate

For information on installing the ROOT certificate, refer to [Installing the ROOT Certificate](#).



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## Chapter 10: CoSign Configuration Utility

The CoSign client behavior in general and each CoSign component in particular have several modes of operation that are suitable for different kinds of usage and customer needs. These different modes of operation can be set by the user, or can be set and then distributed by the organization's administrator.

The CoSign Configuration Utility enables both the user and the administrator to set the configuration of any parameter in any of the CoSign client components both for a single machine and for a group of machines.

All administrator related functionality is described in the *CoSign Administrator Guide*.

### Overview

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The CoSign Configuration Utility is a GUI application that enables a user or administrator to set any of the CoSign client components' configurable parameters easily and intuitively.

The CoSign configuration Utility can run in either of two modes:

- ◆ **Admin mode** – Run by an administrator to build a certain setting for distribution. It can be a registry file or a group policy that can be distributed to different clients by the Active Directory group policy mechanism, using login scripts or manually.
- ◆ **End User mode** – Enables a user (or administrator) to view or configure the CoSign client behavior on the machine on which the utility is running.

The utility displays a components tree, in which you can select the component whose configuration values you wish to set. Each component includes several independent groups of parameters, which can be independently set.

The utility can also be used on a specific machine to view or update the current configuration. This may be useful for debugging purposes or when the client behavior deviates from the expected.



**Note:** *The CoSign Configuration utility is not the only method for changing the CoSign client's behavior. Some of the components have their own GUI for setting their own configuration (such as the ARX Legacy Word Add-in plug-in, OmniSign, and others), but while the components' GUI changes the setting of the current user, the CoSign Configuration utility changes the configuration of the local machine.*

You can also use the CoSign Configuration Utility to retrieve the CoSign internal CA certificate and the CoSign CA CRL (Certificate Revocation List).

## Using the CoSign Configuration Utility

The CoSign Configuration Utility enables you to view and edit all the configurable parameters of the CoSign client components. In End User mode, only the installed components are displayed. Refer to [Running the CoSign Configuration Utility in End User Mode](#), for more information.

### To run the CoSign Configuration Utility:

1. Select **Start > Programs > ARX CoSign > CoSign Control Panel**. The CoSign Control panel appears. Select **Client Configuration**. The CoSign configuration utility's main window appears.

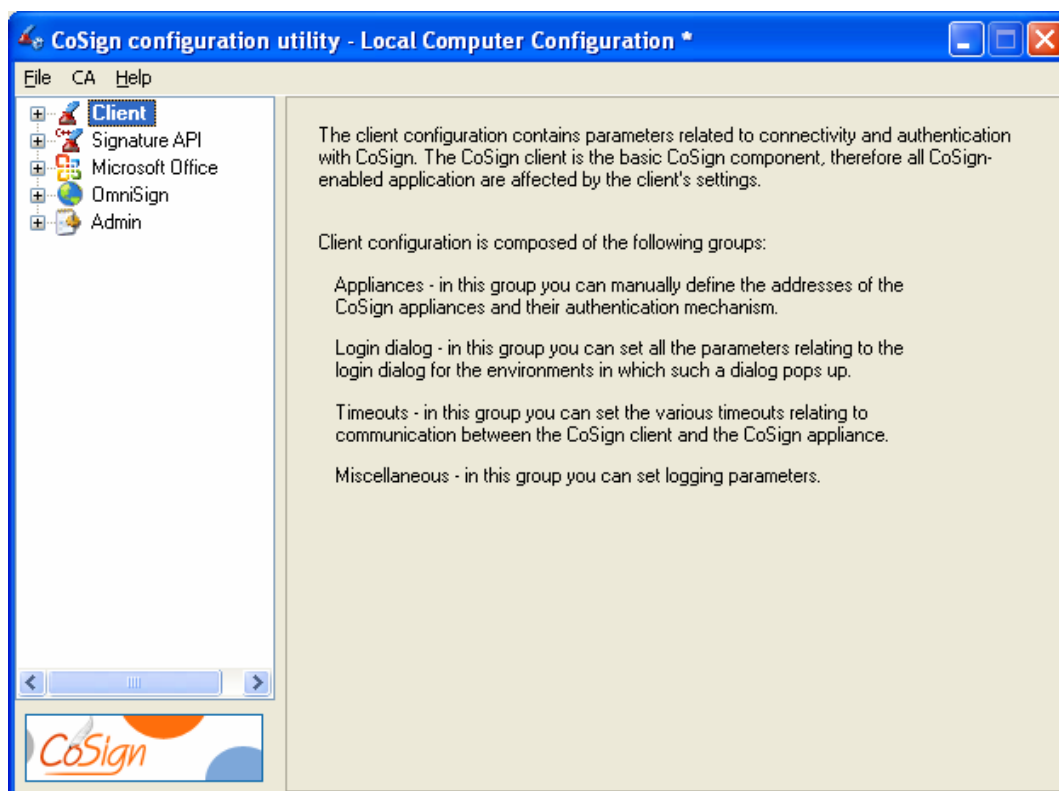



Figure 107 CoSign Configuration Utility – Main Window

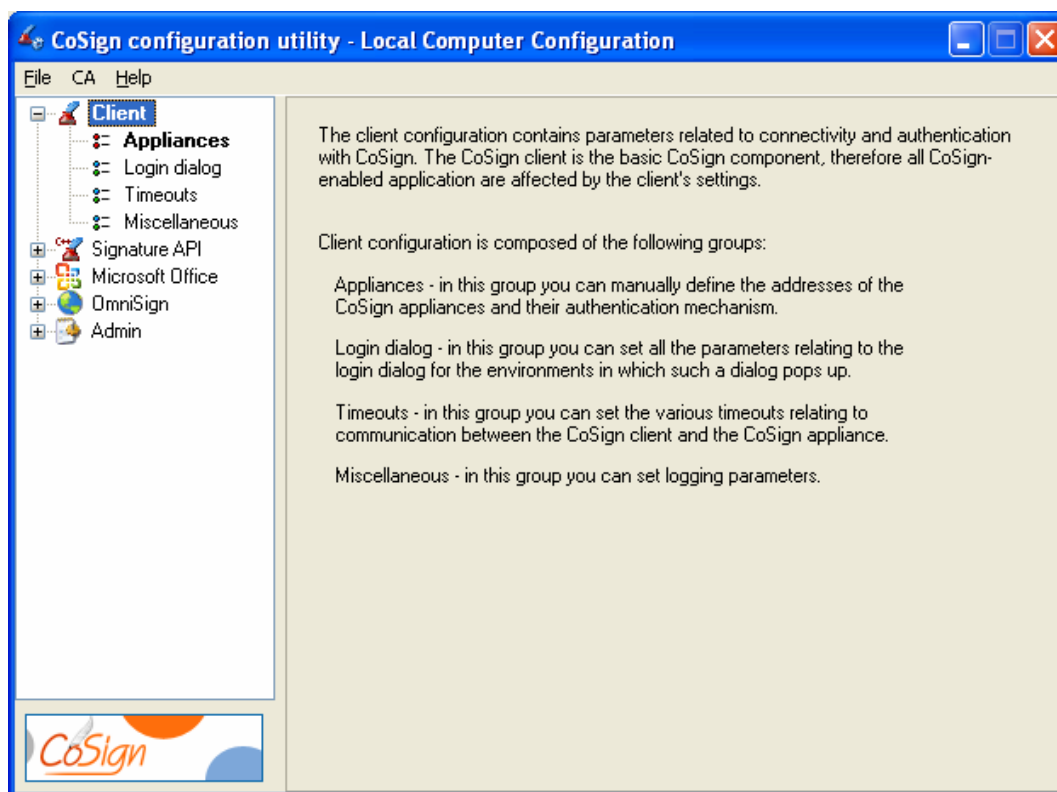
The left pane of the CoSign Configuration Utility displays a components tree. Each node in the highest level of the tree is a configurable client component. Each component has one or more sub-nodes, with each sub-node being a group of parameters. These sub-nodes group parameters by category, except for the Miscellaneous sub-node, which includes all the parameters that are not included in any of the other groups.

### To edit a parameter:

1. Double-click the component to which this parameter belongs, or click  to the left of the component. The component's sub-nodes are displayed (refer to [Figure 108](#)).

2. Select the sub-node that contains the parameter. The right pane displays all the configurable parameters for the sub-node (refer to [Figure 108](#) for an example).

The right pane of each sub-node (except **Miscellaneous**) displays all the configurable parameters, with a triplet of radio buttons on top. Since the **Miscellaneous** group is a collection of various unrelated parameters, it may display several triplets, one for each logical set of parameters.



*Figure 108 Configurable Parameters of a Sub-node*

3. Select one of the radio button options:
  - ◆ **Not Configured** – When this option is selected, the local machine definition of this sub-node’s parameters remains unchanged when the configuration is applied to the local machine.  
When this option is selected, the parameters are disabled.
  - ◆ **Use Defaults** – When this option is selected, registry entries for all this sub-node’s parameters are removed when the configuration is applied to the local machine, and the CoSign defaults are used.  
When this option is selected, the parameters are disabled.
  - ◆ **Set <Sub-node Name> Parameters** – When this option is selected, the sub-node’s parameters become editable and display values where applicable (either the default value or a value taken from the local machine definition). When the configuration is applied to the local machine, **all** the parameters of this group are written to the registry. New registry keys and values will be created if necessary, and the old values,

if defined, are overwritten.

Refer to the following sections for explanations of the parameters of the following configurable CoSign components:

- ◆ [Setting Client Configuration.](#)
- ◆ [Setting Signature API Configuration.](#)
- ◆ [Setting Microsoft Office Configuration.](#)
- ◆ [Setting OmniSign Configuration.](#)



**Note:** Starting from CoSign version 4.4, the name of the section is displayed in bold if any modifications were made to the default values.

## CoSign Configuration Utility Menus

- ◆ The following sections describe the menu options available from the CoSign Configuration Utility: **File**, **CA**, and **Help**. Note that the **File** menu differs for Admin mode and End User mode.

### *File Menu – End User Mode*

The following options are available in End User mode from the **File** drop-down menu:

- ◆ **Export to configuration file** – Enables exporting the local machine settings to a configuration file. Browse for the desired file name and location. Refer to the CoSign Configuration Utility chapter in the *CoSign Administrator Guide*.
- ◆ **Import configuration file** – Enables importing settings from a configuration file. Browse for the desired file name and location. Refer to the CoSign Configuration Utility chapter in the *CoSign Administrator Guide*.
- ◆ **Apply (Save to Registry)** – Enables changing the machine's configuration as per the changes performed using the CoSign Configuration Utility, by applying the changes to the registry. Refer to [Applying the Changes to the Local Registry](#).
- ◆ **Load (From Registry)** – Enables clearing **all** current values in the application dialogs and replacing them with the registry values. Refer to [Reloading the Registry Configuration](#).

### *CA Menu*

The following options are available from the **CA** drop-down menu:

- ◆ **Install CoSign CA Certificate** – Enables installing CoSign's ROOT certificate into the current user's PC. Refer to [Chapter 2: Deploying the CoSign Client](#) for information relating to CoSign's ROOT certificate.
- ◆ **Download CoSign CA Certificate** – This option is very similar to the **Install CoSign CA Certificate** option. The difference is that in this case the CoSign ROOT CA certificate is output to a selected file. The downloaded file can be placed in the AIA location according to the AIA field defined in the users' certificates.



- ◆ **Download CoSign CA CRL** – Enables downloading the CoSign CRL (Certificate Revocation List) to a file. The downloaded file can be placed in the CDP (CRL Distribution Point) location according to the CDP field defined in the users' certificates.

### *Help Menu*

The following options are available from the **Help** drop-down menu:

- ◆ **About** – Displays the version of the CoSign configuration utility as well as a link to the ARX web site.
- ◆ **Contents** – Displays the content of this chapter in on-line help format.
- ◆ **Create report** – Enables generating a report listing information on both the CoSign Client installation and the CoSign appliance installation. Click **Save** to save the report to a file. The file can be sent to ARX support for problem analysis.

The report includes three parts:

- ◆ **CoSign Client installation files** – Includes all the files of the CoSign installation, their dates, sizes and version information.
- ◆ **CoSign Client and Server parameters** – Includes CoSign Client and Server parameters. The parameters also include information that is displayed in the CoSign console.
- ◆ **Environmental information** – Displays information about the PC in which the CoSign client is installed, the version of the installed MS Office application, and other parameters that can be valuable to ARX support for problem analysis.

## **Running the CoSign Configuration Utility in End User Mode**

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The CoSign Configuration Utility can also be used for editing and viewing a specific machine's settings. When the application runs in End User mode, it looks for all the CoSign components that are installed, and for each component reads its settings and displays them in the relevant dialog.

### **To run the CoSign Configuration Utility in End User mode:**

1. Select **Start > Programs > ARX CoSign > CoSign Control Panel**. The CoSign Control panel appears. Select **Client Configuration**. The CoSign configuration utility's main window appears.

In End User mode, the information in the right pane reflects the state of the CoSign client parameters in the registry. For each group of parameters, the **Use Defaults** option is selected if none of this group's values were set in the registry, and the fields are greyed out. If some of the group's values were set in the registry, the **Set <Sub-node Name> Parameters** option is selected. After editing the parameters' values, the changes must be applied in order to update the registry. These actions are described below.



**Note:** *To change settings in End User Mode, the current user must have the appropriate permissions to change registry values under `HKEY_LOCAL_MACHINE`.*

After the CoSign Configuration Utility is up and running, you can view and edit all the settings, or you can import additional settings from a configuration file and then edit all settings. When editing is complete, you can either apply the changes to the local machine's registry or export them to a configuration file.

Following is the list of actions that can be performed in End User mode:

- ◆ [Viewing and Editing CoSign Client Settings](#).
- ◆ [Applying the Changes to the Local Registry](#).
- ◆ [Reloading the Registry Configuration](#).
- ◆ Installing and downloading the CoSign CA certificate (refer to [Install CoSign CA Certificate](#) and [Download CoSign CA Certificate](#)).
- ◆ Downloading the CoSign CA CRL (Certificate Revocation List) (refer to [Download CoSign CA CRL](#)).

## Viewing and Editing CoSign Client Settings

To view and edit the CoSign Client Settings, follow the instructions in [Using the CoSign Configuration Utility](#).

Changing CoSign client values using the CoSign Configuration Utility does not automatically change the machine's configuration. They must be explicitly applied in order to take effect (refer to [Applying the Changes to the Local Registry](#)).

## Applying the Changes to the Local Registry

Changes performed using the CoSign Configuration Utility do not automatically change the machine's configuration. They must be explicitly applied to the registry in order to take effect. Select **File > Apply (save to registry)** to apply all changes to the local machine settings. If you close the application without specifying **Apply (save to registry)**, you will lose all the changes you have made.



**Note:** *If you would like to restore default values after applying changes to the registry, do not use the **Not Configured** option. Instead, use the **Use Defaults** option which enforces resetting of the parameters back to the default values.*

## Reloading the Registry Configuration

If you are not satisfied with the changes you made to the configuration, and have not yet saved them to the registry, or if the local setting was changed outside the application and you want to reload the current setting from the registry, select **File > load (from registry)** to clear **all** current values in the application dialogs and replace them with the registry values.

## Setting Client Configuration

The client configuration contains parameters related to connectivity and authentication with CoSign. The CoSign client is the basic CoSign component, therefore all CoSign-enabled applications are affected by the client's settings.

Client configuration is composed of the following groups:

- ◆ **Appliances** – In this group you can manually define the addresses of the CoSign appliances and their authentication mechanism.
- ◆ **Login dialog** – In this group you can set all the parameters relating to the login dialog for the environments in which such a dialog pops up.
- ◆ **Timeouts** – In this group you can set the various timeouts relating to communication between the CoSign client and the CoSign appliance.
- ◆ **Miscellaneous** – In this group you can set logging parameters and other miscellaneous parameters.

### Client – Appliances

This group enables you to manually set the IP address or DNS name of the CoSign appliances the machine should work with, usually in Directory Independent environments, and whether to pop up a logon dialog and signing dialog.

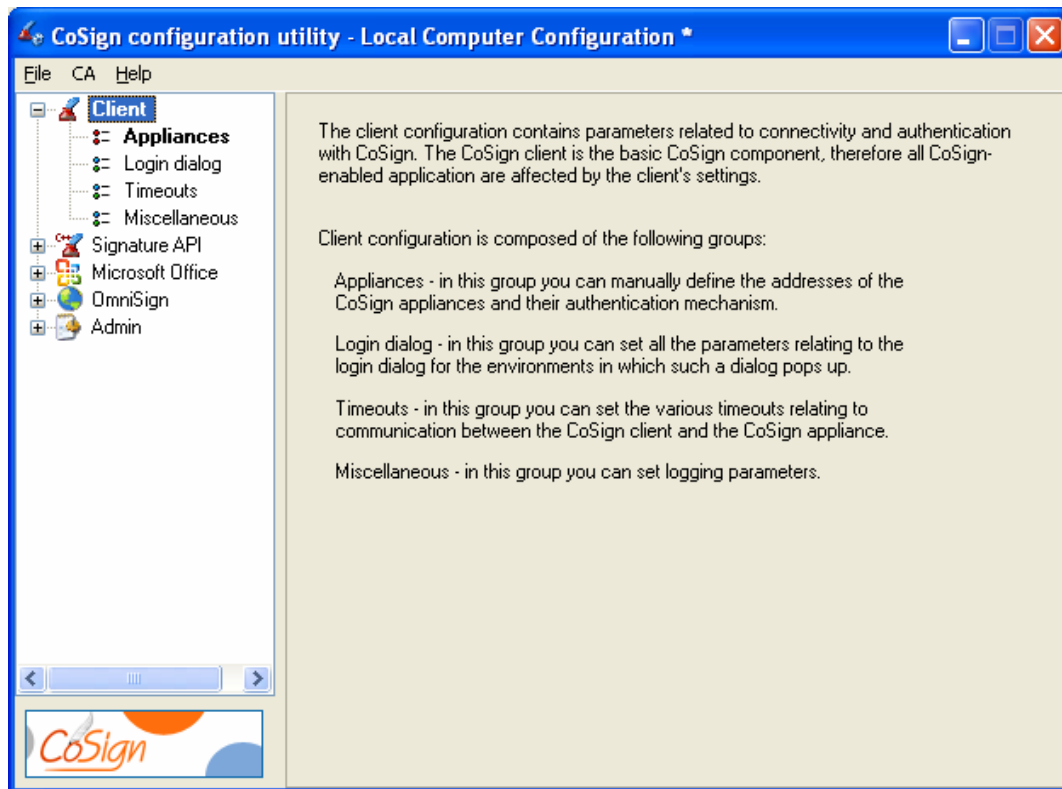


Figure 109 Configuring Client – Appliances Parameters

In the **Appliances** group you can set the following CoSign client parameters:

- ◆ **SSL Proxy definitions** – If the CoSign client can connect to the CoSign appliance only through an SSL proxy, provide the SSL proxy parameters to enable communications. Specify the following:
  - ◆ **Enable automatic ssl proxy detection** – If this parameter is checked, the CoSign client will use the local PC definitions of the SSL proxy. In this case other SSL proxy parameters are disabled.
    - ◆ **SSL Proxy address** – The DNS name or IP address of the SSL Proxy.
    - ◆ **port** – The TCP/IP port number of the SSL proxy.
- ◆ **Prompt for logon method** – Select one of the following values if you wish to enforce a specific logon method that is different from the one defined in CoSign:
  - ◆ **Auto** (default) – The value is chosen automatically according to system setup.
  - ◆ **SSPI** – Enable login through Single-Sign-On mode (relevant for Active Directory environments).
  - ◆ **User Pwd Server Side (AD/NDS/LDAP)** – The user and password are passed to the server for verification and the authentication check is performed by the CoSign appliance. This option is relevant for Active Directory, Novell NDS, and LDAP environments.
  - ◆ **SSPI User Pwd Client Side (AD)** – The user is requested to input the user name and password, which will be verified by the CoSign client. This option is relevant only for Microsoft Active Directory environments.
  - ◆ **Directory Independent Prompt** – The user password mechanism used in Directory Independent environments.
- ◆ **Prompt for sign method** – Select one of the following values if you wish to enforce a specific authentication method that is different from the one defined in CoSign:
  - ◆ **Auto** (default) – The value is chosen automatically according to system setup.
  - ◆ **None** – No prompt appears upon digital signature operation.
  - ◆ **User Pwd Server Side (AD/NDS/LDAP)** – The user name and password are passed to the server for verification. This option is relevant for Active Directory, Novell NDS, and LDAP environments.
  - ◆ **Directory Independent Prompt** – The user password mechanism used in Directory Independent environments.
- ◆ **Directory type** – Specify the directory used for synchronizing the CoSign users:
  - ◆ **Auto** (default) – The directory type is taken from the CoSign server.
  - ◆ **AD** – The CoSign users are defined in Active Directory.
  - ◆ **NDS** – The CoSign users are defined in Novell's Directory.
  - ◆ **LDAP** – The CoSign users are defined in an LDAP Directory.

- ◆ **Directory Independent** – The CoSign users are not automatically synchronized with any directory.

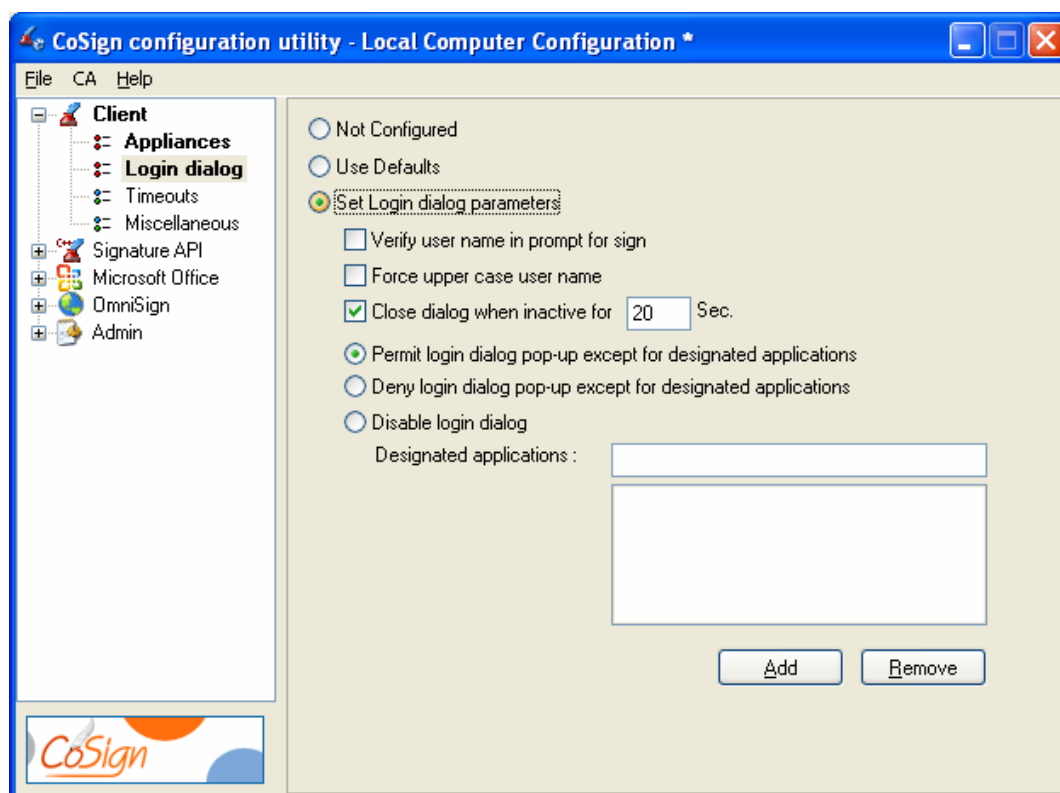


**Note:** *The directory type influences the automatic behavior of prompt for logon method and prompt for sign method.*

- ◆ **Preferred Server** – If this field is not empty, the CoSign client will first attempt to connect to this CoSign appliance. The Preferred server must be listed either in the SCP CoSign servers list or in the following Appliances List.
- ◆ **Appliances list** – Enter the list of all available CoSign appliances. If more than one appliance is added, the CoSign client performs load balancing between them. Use the **Add** and **Remove** buttons to edit the list. You can specify a CoSign appliance by either its IP address or its DNS name.

## Client – Login Dialog



This group enables you to control the login dialog behavior.



*Figure 110 Configuring Client – Login Parameters*


In the **Login** group you can set the following CoSign client parameters:

- ◆ **Verify user name in prompt for sign** – If this value is checked, the user has to provide both the user name and password if prompt for sign is set. Otherwise, the user name is provided automatically by the Prompt for Sign dialog.

- ◆ **Force upper case user name** – Change this value only if instructed to do so by ARX support.
- ◆ **Close dialog when inactive for <number> Sec.** – Determines the time of inactivity the login dialog waits before automatically closing itself.
  - ◆  **Note:** *If the login dialog closes itself, the logon operation fails.*
- ◆ **Permit login dialog pop-up except for designated applications** – Select this option to enable all applications to pop up the login dialog except for the applications listed in the **Exceptional applications** field.
- ◆ **Deny login dialog pop-up except for designated applications** – Select this option to prevent all applications from popping up the login dialog except for the applications listed in the **Exceptional applications** field.
  - ◆  **Note:** *The previous two options are relevant only in environments where a login dialog should pop up before working with CoSign.*
- ◆ **Disable login dialog** – Prevent all applications from popping up the login dialog. If this option is selected and an application tries to pop up the login dialog, the operation will fail, and no dialog is displayed. This option should be used for unattended environments.
- ◆ **Designated applications** – A list of applications referenced by the options **Permit login dialog pop-up except for designated applications** and **Deny login dialog pop-up except for designated applications**. Use the **Add** and **Remove** buttons for editing this list.

## Client – Timeouts

This group enables you to set the various timeouts relating to communication between the CoSign client and the CoSign appliance.

- ◆  **Note:** *Do not change the timeouts parameters unless instructed to do so by ARX technical support. Incorrect values might prevent the user from succeeding in connecting the CoSign appliance.*

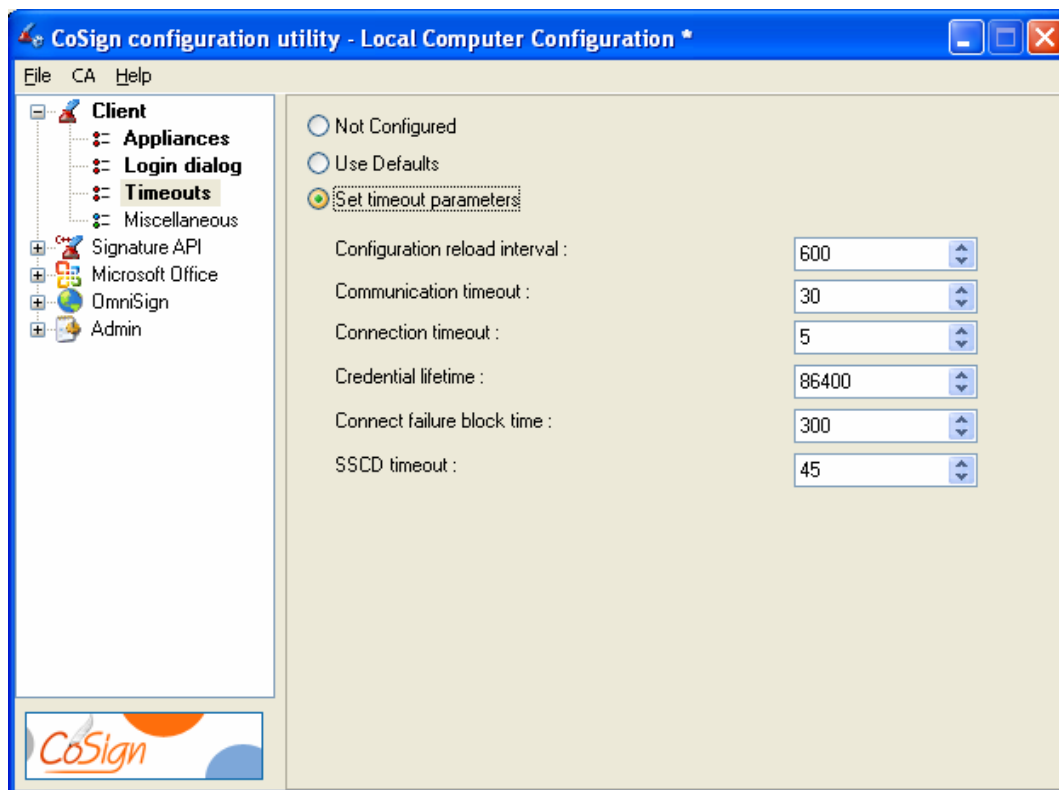


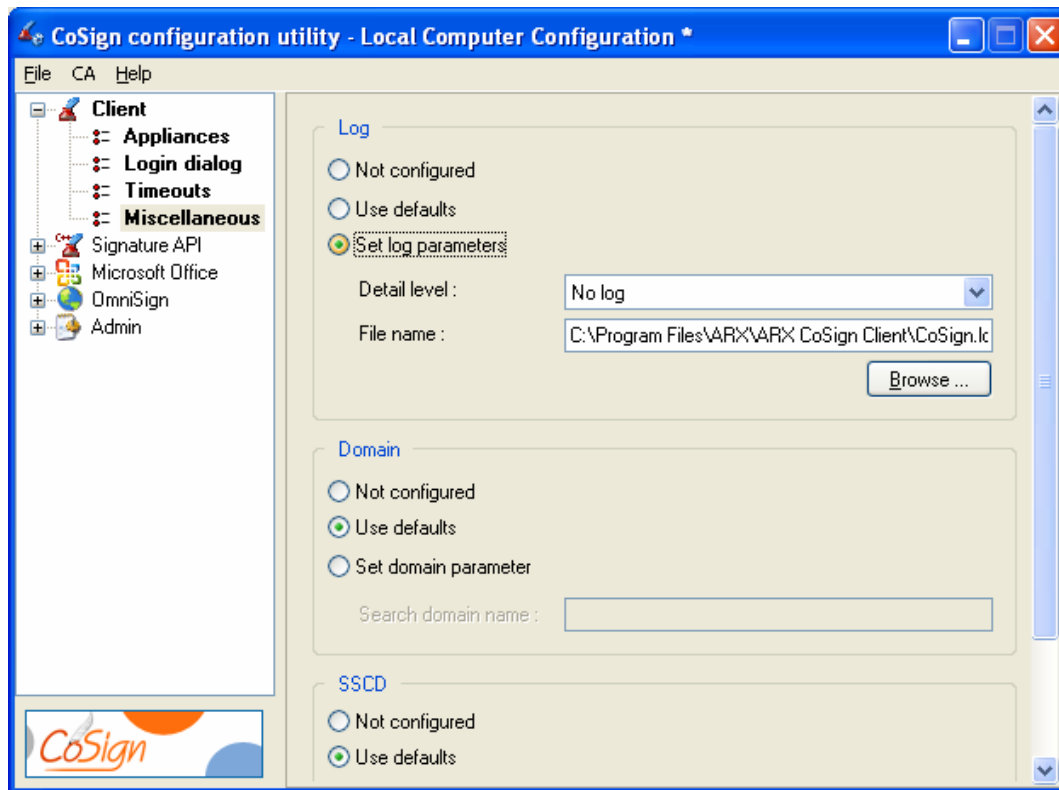
Figure 111 Configuring Client – Timeouts Parameters

## Client – Miscellaneous

This group enables you to set the logging parameters of the CoSign client and other miscellaneous parameters. These logging parameters affect only the layer of communication between the client and the CoSign appliance, and do not affect any other client components. To set the logging parameters of a specific component, configure the logging parameters in the Miscellaneous sub-node of that component.



**Note:** *Changing the logging parameters can extensively degrade the performance of the client. It is therefore recommended not to change the logging parameters unless instructed to do so by ARX technical support.*



*Figure 112 Configuring Client – Miscellaneous Parameters*

In the **Miscellaneous** group you can set the following CoSign client parameters:

- ◆ **Detail level** – The reporting level to the log.
- ◆ **File name** – The path for the CoSign client log file.
- ◆ **Domain** – Do not set this parameter unless instructed to do so by ARX technical support.
- ◆ **SSCD** – In this section you can setup client parameters if the CoSign appliance hardware is CoSign SSCD.
  - ◆ **Place Manually generated keys on SSCD** – If this option is set, any newly generated key (usually through enrollment to an external CA) will be placed inside the SSCD device. If this option is not set, the newly generated key will be placed and encrypted in the CoSign Appliance’s internal database.
  - ◆ **Disable automatic enrollment** – If this option is set, the enrollment for the user’s first SSCD key can be activated only through the CoSign control panel. If this option is not set, any application that connects to CoSign, such as Microsoft Word, can trigger the enrollment of the new CoSign key.

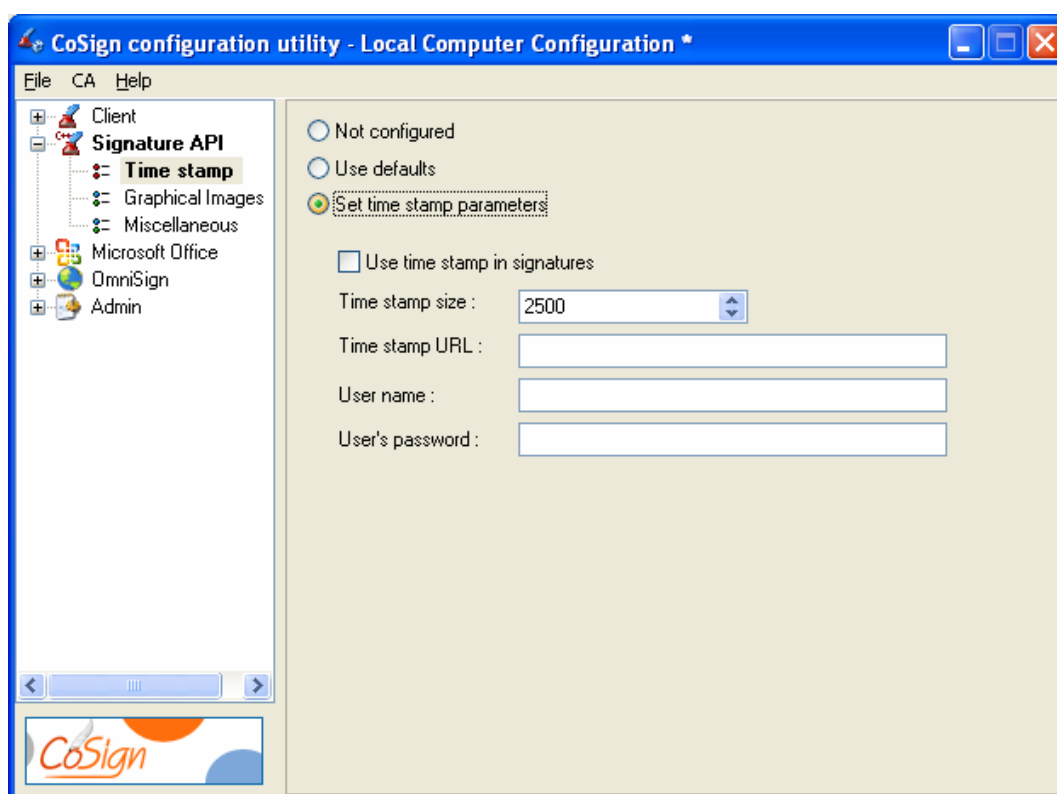


## Setting Signature API Configuration

SAPI is a programming interfacing component used by CoSign and by software developers to interface with CoSign. The SAPI (Signature API) configuration enables you to define time stamping parameters and graphical image parameters, as well as logging parameters related to SAPI operations.

### Signature API – Time Stamp

This group enables you to define time stamp server parameters so that every digital signature will include a time stamp. These parameters are relevant to any SAPI based application, including OmniSign and the Legacy Office add-in.



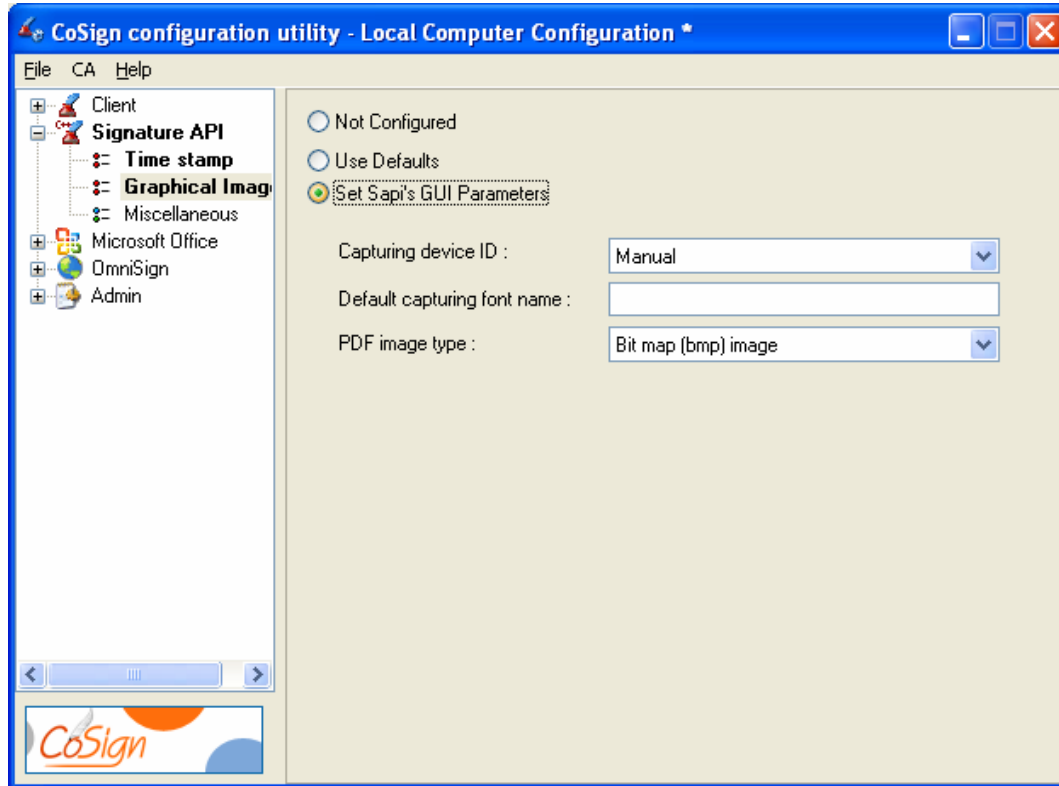
*Figure 113 Configuring Signature API – Time Stamp Parameters*

In the **Time stamp** group you can set the following Signature API parameters:

- ◆ **Use time stamp in signatures** – If this option is selected, a time stamp is used for every generated digital signature.
- ◆ **Time stamp size** – The size of the place holder for the time stamp information. Do not change this value without consulting with ARX.
- ◆ **Time stamp URL** – The HTTP or HTTPS location of the time stamp server.
- ◆ **User name** – The user name of a user who is authorized to use the time stamp server.
- ◆ **User's password** – The password of the authorized user.

## Signature API – Graphical Images

This group enables you to define settings for using graphical images through the SAPI applications.



*Figure 114 Configuring Signature API – Graphical Images Parameters*

In the **Graphical Images** group you can set the following Signature API parameters:

- ◆ Capturing device ID – Specify the mechanism or device to be used by the ARX graphical signature application to upload a graphical image to CoSign:
  - ◆ Automatic – The currently installed capture device is the device used to enter the graphical image. In this mode, if no capture device is installed, the graphical signature will be captured from a Tablet-PC or a Mouse.
  - ◆ Manual – The user can select the capturing mechanism directly from the graphical signature application.
  - ◆ Extended – Do not use this option.
  - ◆ Topaz SigLite – The Topaz SigLite device is used.
  - ◆ Interlink ePad – The Interlink ePad device is used.
  - ◆ Tablet PC / Mouse – Either a Tablet-PC or a Mouse is used to enter a graphical image.
  - ◆ Script Font – A script font is used to enter a specially formatted graphical image.

- ◆ **Default capturing font name** – If a script font is used to enter the graphical image, you can specify the default script font.
- ◆ **PDF image type** – This option is relevant for the **Update Acrobat** operation in the Graphical Signatures Utility that imports graphical images into Adobe Acrobat 6/7/8 and Adobe Reader 6/7/8. You can select one of the following options:
  - ◆ **Bit map (bmp) image** – The graphical image is stored in the document as a bitmap.
  - ◆ **Line vectors** – The vectorial representation of the graphical image is stored in the document.

## Signature API – Miscellaneous

This group enables you to set the logging parameters of the SAPI lib.



**Note:** *Changing the logging parameters can extensively degrade the performance of the client. It is therefore recommended not to change the logging parameters unless instructed to do so by ARX technical support.*

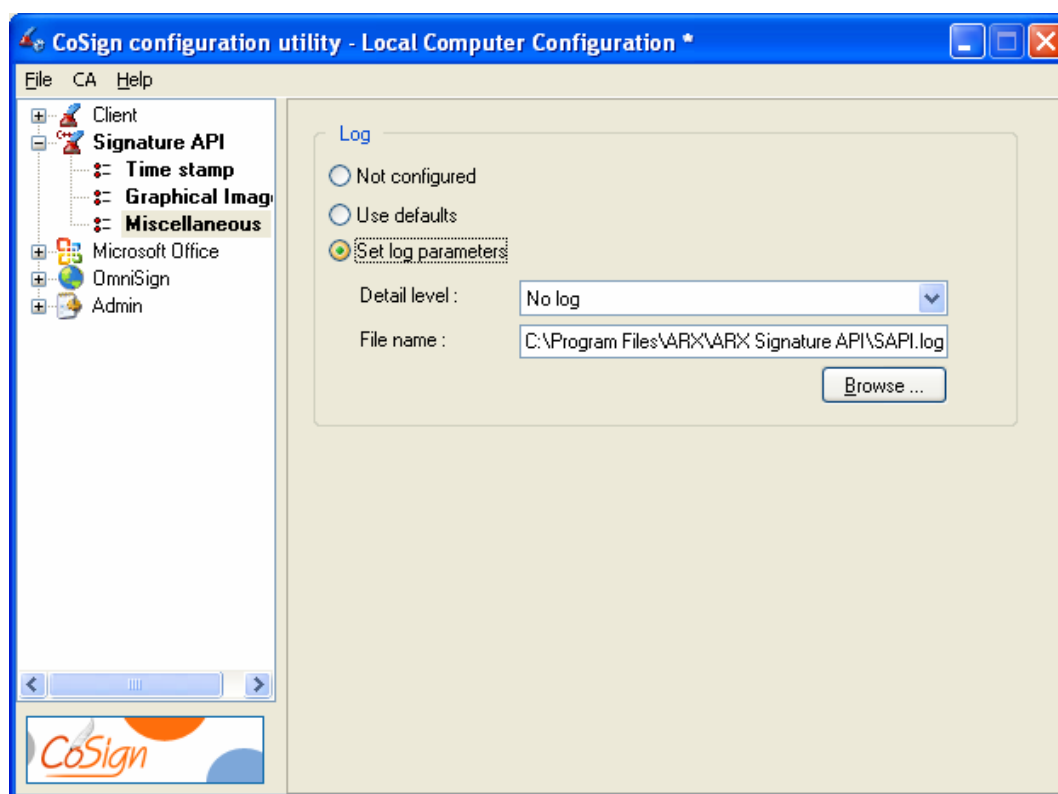


Figure 115 Configuring Signature API – Miscellaneous Parameters

In the **Miscellaneous** group you can set the following Signature API parameters:

- ◆ **Detail level** – The reporting level to the log.
- ◆ **File name** – The path for the SAPI log file.

## Setting Microsoft Office Configuration

---

The Microsoft Office configuration enables you to set the default behavior of the signing operation in Word, Excel, and InfoPath. This includes the signature appearance, the signing method, which data will be signed, and a list of available reasons for signing and logging.

Microsoft Office configuration also enables you to configure parameters that may be applicable for the ARX Signature Line Provider for Office 2007 as well as for the ARX Legacy Word Add-in for Word/Excel 2000/XP/2003.

The Microsoft Office configuration is composed of the following groups:

- ◆ **Appearance** – In this group you can configure the default appearance of a signed signature field.
- ◆ **Settings** – In this group you can set parameters relating to the signing method, algorithms, and the data to sign.
- ◆ **Reasons** – In this group you can edit the list of reasons that can be attached to a signed signature field.
- ◆ **Excel Specific** – In this group you can configure the content and scope of data that will be signed in Excel.
- ◆ **Word Specific** – In this group you can configure the content and scope of data that will be signed in Word.
- ◆ **Miscellaneous** – In this group you can set the Office logging parameters, indicate whether to check CRLs, and indicate whether to enforce the local machine settings over the local user settings.

For more information on using CoSign to sign Word and Excel documents, refer to [Chapter 3: Signing Microsoft Office Documents](#). For more information on using InfoPath, refer to [Chapter 4: Signing InfoPath Forms](#).

## Microsoft Office – Appearance

This group enables you to set the default appearance of a signed signature field, including the fields to be displayed, the size, and the time format.

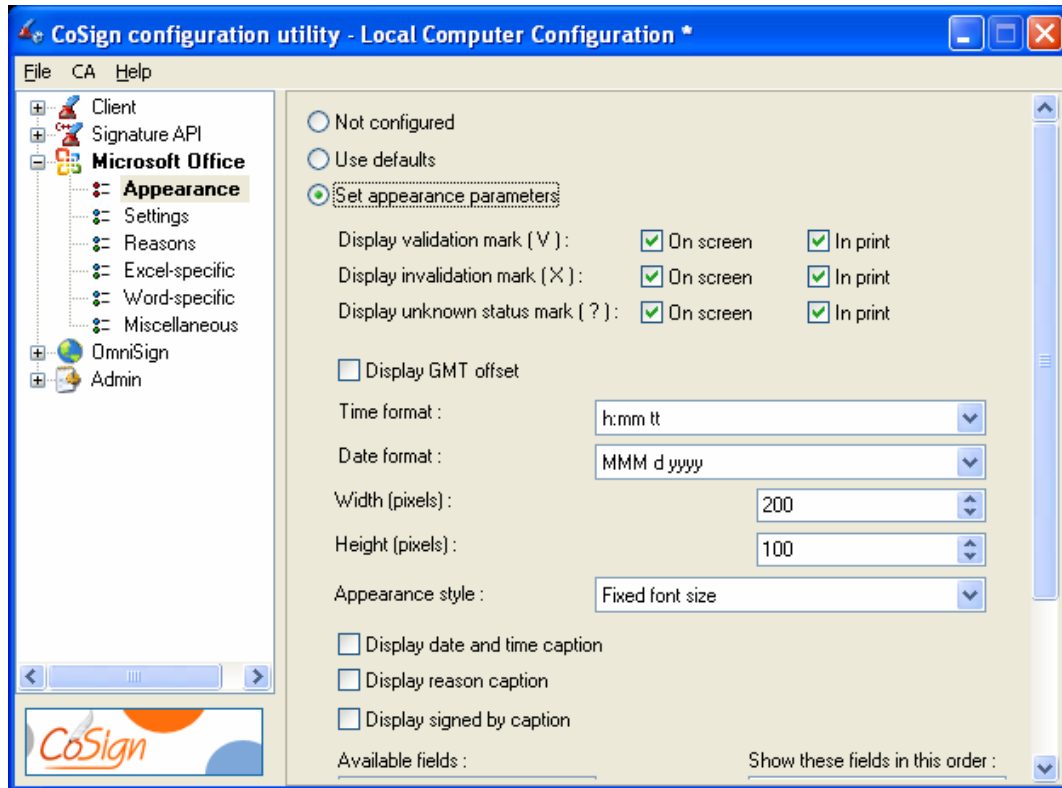


Figure 116 Configuring Microsoft Office – Appearance Parameters

In the **Appearance** group you can set the following Microsoft Office parameters:

- ◆ **Display validation mark (V)** – Check the **On Screen** option and/or the **In Print** option to specify that the document on screen and/or the printed document will include this symbol if the signature is valid.  
This option is relevant only for the ARX Legacy Word Add-in for Office 2000/XP/2003.
- ◆ **Display invalidation mark (X)** – Check the **On Screen** option and/or the **In Print** option to specify that the document on screen and/or the printed document will include this symbol if the signature is invalid.  
This option is relevant only for the ARX Legacy Word Add-in for Office 2000/XP/2003.
- ◆ **Display unknown status mark (?)** – Check the **On Screen** option and/or the **In Print** option to specify that the document on screen and/or the printed document will include this symbol if the status of the signature is unknown.  
This option is relevant only for the ARX Legacy Word Add-in for Office 2000/XP/2003.
- ◆ **Display GMT offset** – Specify whether the GMT offset will be displayed.  
This option is relevant for both the ARX Legacy Word Add-in for Office 2000/XP/2003 and for the ARX Signature Line provider.

- ◆ **Time format** – Specify the displayed time format.  
This option is relevant for both the ARX Legacy Word Add-in for Office 2000/XP/2003 and for the ARX Signature Line provider.
- ◆ **Date format** – Specify the displayed date format.  
This option is relevant for both the ARX Legacy Word Add-in for Office 2000/XP/2003 and for the ARX Signature Line provider.



**Note:** *Display GMT offset, Time format, and Date format are relevant only if the Date and Time field is displayed in the signed signature field.*

- ◆ **Width (pixels)** – The width of the digital signature field in pixels.  
This option is relevant only for the ARX Legacy Word Add-in for Office 2000/XP/2003.
- ◆ **Height (pixels)** – The height of the digital signature field in pixels.  
This option is relevant only for the ARX Legacy Word Add-in for Office 2000/XP/2003.
- ◆ **Appearance style** – The format of the display of items inside the graphical signature image.  
This option is relevant only for the ARX Legacy Word Add-in for Office 2000/XP/2003.  
There are two available options:
  - ◆ **Fixed font size** – All text fields in the image are displayed in the same font size. This size is determined by the size of the image.  
This is the default option.
  - ◆ **Variable font size** – The font size of the various text fields is not fixed. This was the default option in previous versions.
- ◆ **Display date and time caption** – Determines whether the title field **Date and Time** is displayed before the actual date and time field.  
This option is relevant only for the ARX Legacy Word Add-in for Office 2000/XP/2003.
- ◆ **Display reason caption** – Determines whether the title field **Reason** is displayed before the actual reason field.  
This option is relevant only for the ARX Legacy Word Add-in for Office 2000/XP/2003.
- ◆ **Display signed by caption** – Determines whether the title field **Signed By** is displayed before the actual signer field.  
This option is relevant only for the ARX Legacy Word Add-in for Office 2000/XP/2003.
- ◆ **Show these fields in this order** – Specify which fields are displayed in the signed signature field, and in what order. Use the **Add** and **Remove** buttons to move fields to/from the **Available fields** box. Use the **Move Down** and **Move Up** buttons to change the order of the fields.  
This option is relevant for both the ARX Legacy Word Add-in for Office 2000/XP/2003 and for the ARX Signature Line provider for Office 2007. However, the order of the fields is relevant only for the ARX Legacy Word Add-in for Office 2000/XP/2003.

## Microsoft Office – Settings

This group enables you to set the signing mechanism and algorithm as well as the data to be signed.

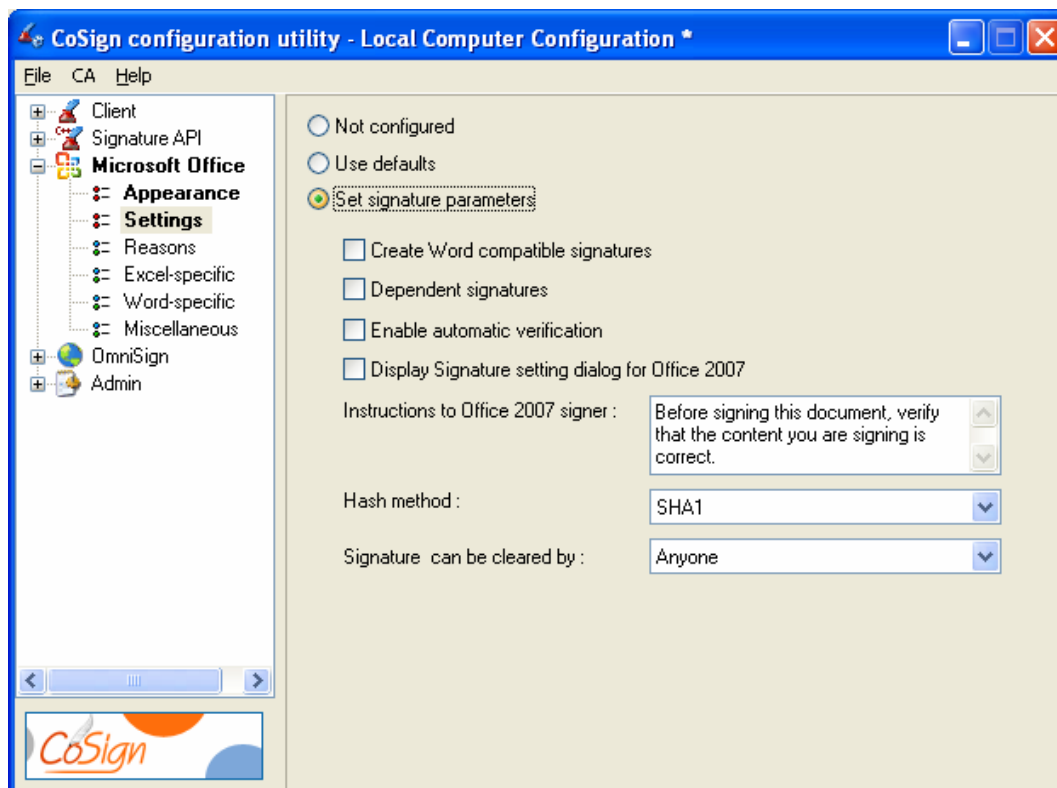


Figure 117 Configuring Microsoft Office – Settings Parameters

In the **Settings** group you can set the following Microsoft Office parameters:

- ◆ **Create Word compatible signatures** – Select this option to generate a digital signature that can be validated in Word XP, Word 2003, and Word 2007 without the ARX Legacy Word Add-in plug-in (refer to [Validating Graphical Signatures in Word documents Without Using the ARX Legacy Word Add-in Plug-in](#)). This option is not relevant to ARX Signature Line provider.
- ◆ **Dependent signatures** – Select this option to specify that all newly created digital signatures be dependent. This option is not relevant to ARX Signature Line provider.
- ◆ **Enable automatic verification** – Select this option to direct MS Word or MS Excel to automatically verify all digital signatures of a document upon opening an existing document. This option is not relevant to ARX Signature Line provider.
- ◆ **Display Signature Setting Dialog for Office2007** – Use this option to direct the ARX Signature Line Provider for Office 2007 to display to the user the Signature Setting dialog upon field creation.

- ◆ **Instructions to Office 2007 Signer** – Use this option to specify the text that will be displayed to the user in the signature form during signature operation. This option is relevant to the ARX Signature Line provider.
- ◆ **Hash method** – Do not modify this field. This option is not relevant to the ARX Signature Line provider.
- ◆ **Signature can be clear by** – Specify the default policy for clearing signatures when using the ARX legacy office add-in. The options include:
  - ◆ **Anyone** – Anyone can clear a signed field.
  - ◆ **No one** – No one can clear a signed field.
  - ◆ **Signer only** – Only the signer can clear a signed field.

## Microsoft Office – Reasons

This group enables you to build and edit the list of available reasons for signing, as well as to select one of them as the default reason.

This window is relevant for both the ARX Legacy Word Add-in for Office 2000/XP/2003 and for the ARX Signature Line provider for Office 2007.

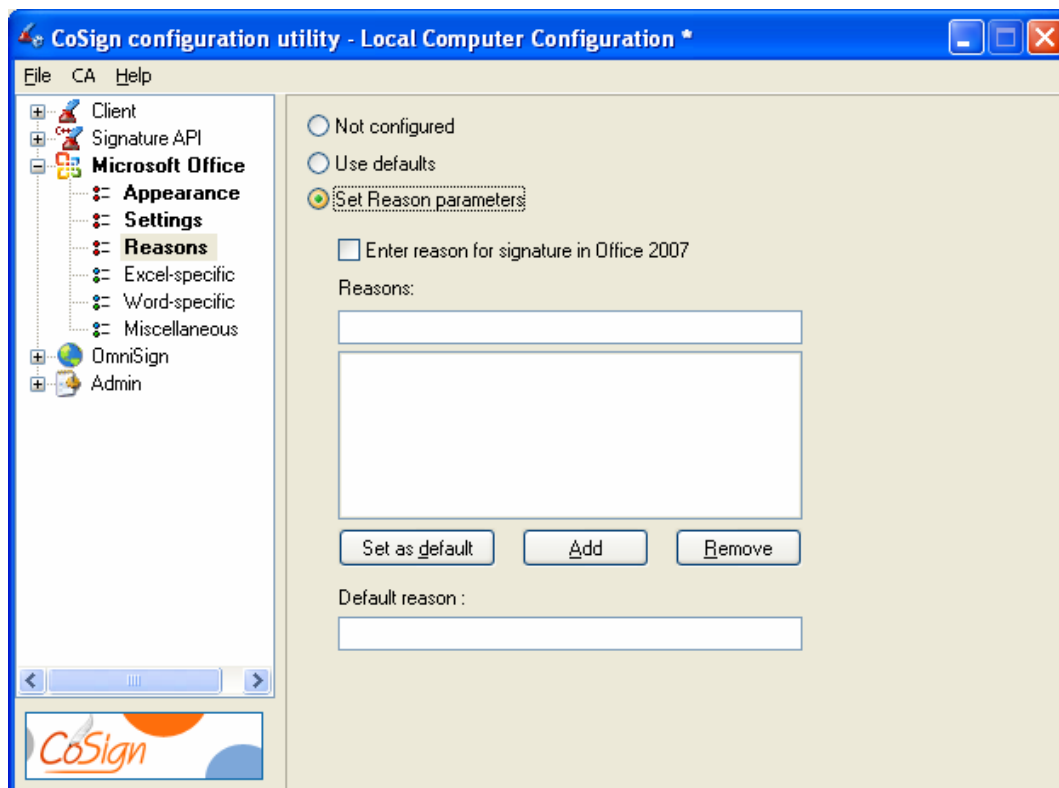


Figure 118 Configuring Microsoft Office – Reasons Parameters



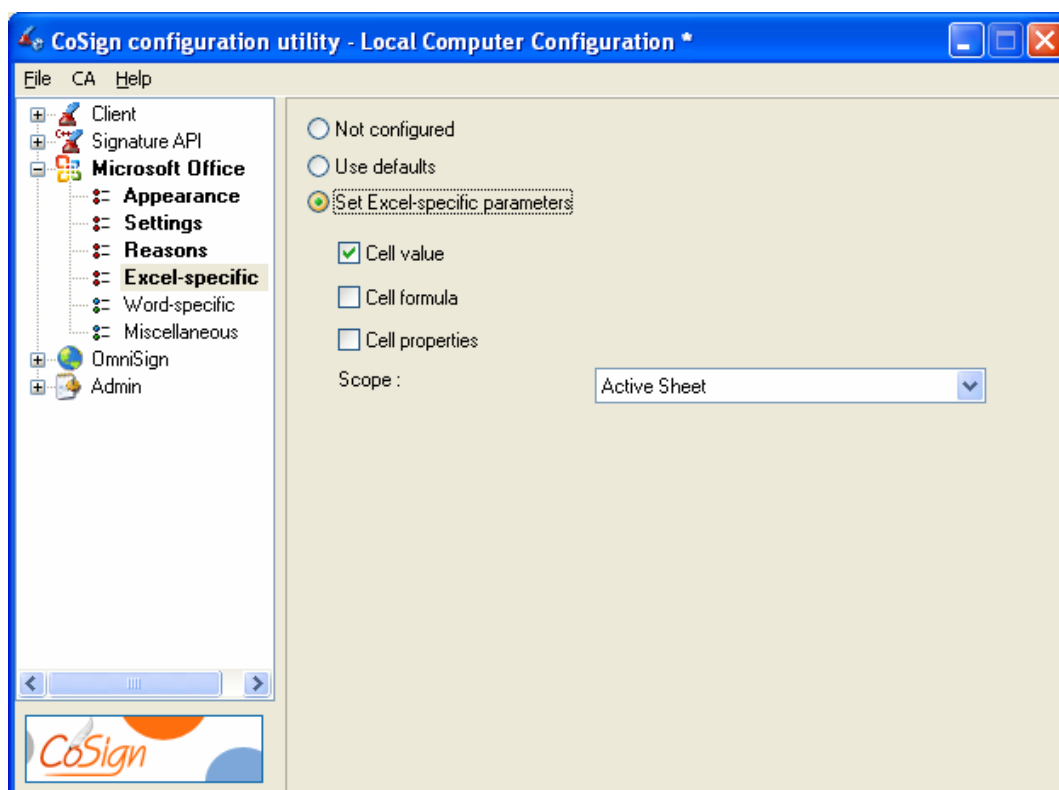
In the **Reasons** group you can set the following Microsoft Office parameters:

- ◆ **Enter reason for signature in Office 2007** – If you select this option, then the digital signature form is displayed for every signature operation, and the user is requested to add a reason for the digital signature operation.
- ◆ **Reasons** – The list of reasons displayed for the user when a signature field is signed. You can enter a new reason and click **Add** to add it, or select a reason and click **Remove** to remove it from the list.
- ◆ **Default reason** – The default reason displayed to the user when signing a signature field. The user can either click **OK** to sign with this reason, or select another reason and then continue with the signing operation. To specify the default reason, you can either edit a reason in this field or select one from the **Reasons list** and click **Set as default**.

### Microsoft Office – Excel Specific

These options are relevant only to the ARX Legacy Word Add-in plug-in for Win2000/XP/2003.

This group enables you to set the default content and scope of the data to be signed when performing a digital signature in Excel.



*Figure 119 Configuring Microsoft Office – Excel Specific Parameters*

In the **Excel-specific** group you can set the following Microsoft Office parameters:

- ◆ **Cell value** – Check this option to include the value of the cells in the data to be signed.

- ◆ **Cell formula** – Check this option to include the formula of the cells in the data to be signed.
- ◆ **Cell properties** – Check this option to include the properties of the cells in the data to be signed.
- ◆ **Scope** – Indicates the scope of the data to be signed. You can select one of the following values:
  - ◆ **Active Sheet** – Only the data in the active sheet will be signed.
  - ◆ **Workbook** – All data in the workbook will be signed.
  - ◆ **Selection** – Only the data in a specific selection of cells will be signed.



**Note:** You must set either **Cell value** or **Cell formula** or both.

### Microsoft Office – Word Specific

These options are relevant only to the ARX Legacy Word Add-in plug-in for Win2000/XP/2003.

This group enables you to set the default content and scope of the data to be signed when performing a digital signature in Word.

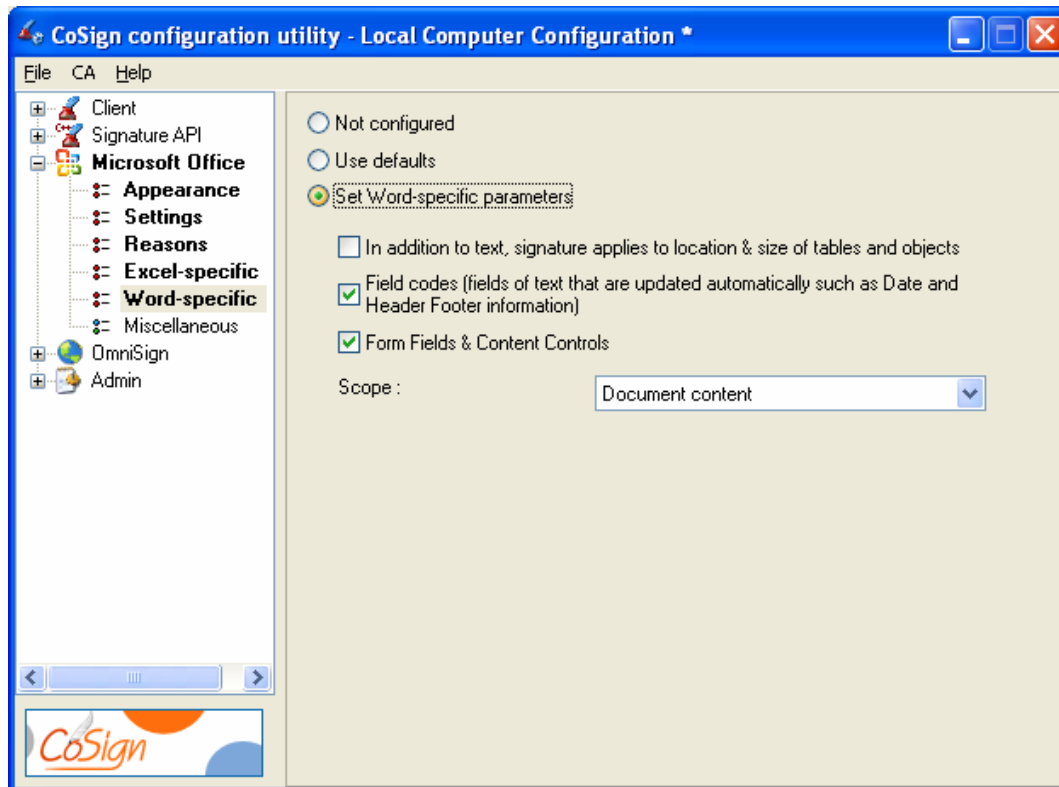


Figure 120 Configuring Microsoft Office – Word Specific Parameters

In the **Word-specific** group you can set the following parameters:

- ◆ **In addition to text, signature applies to location & size of tables and objects** – Check this option to include in the signature the values of the location and size of tables and objects. This option is relevant only for content-based signatures.
- ◆ **Field codes** – Check this option to include in the signature the values of field codes. These are text fields that are updated automatically, such as Date or Header/Footer information.
- ◆ **Form Fields & Content Controls** – Check this option to include in the digital signature information from Form Fields Content control.
- ◆ **Scope** – Indicates the scope of the data to be signed. You can select one of the following values:
  - ◆ **Entire File** – The entire content of the Word file will be signed.
  - ◆ **Document Content** – All the textual and visible content of the Word document will be signed.
  - ◆ **Selection** – All the textual content of the current selection will be signed.

## Microsoft Office – Miscellaneous

This group enables you to set the logging parameters, the CRL checking flag and to enforce centralized management of all the MS Office settings.

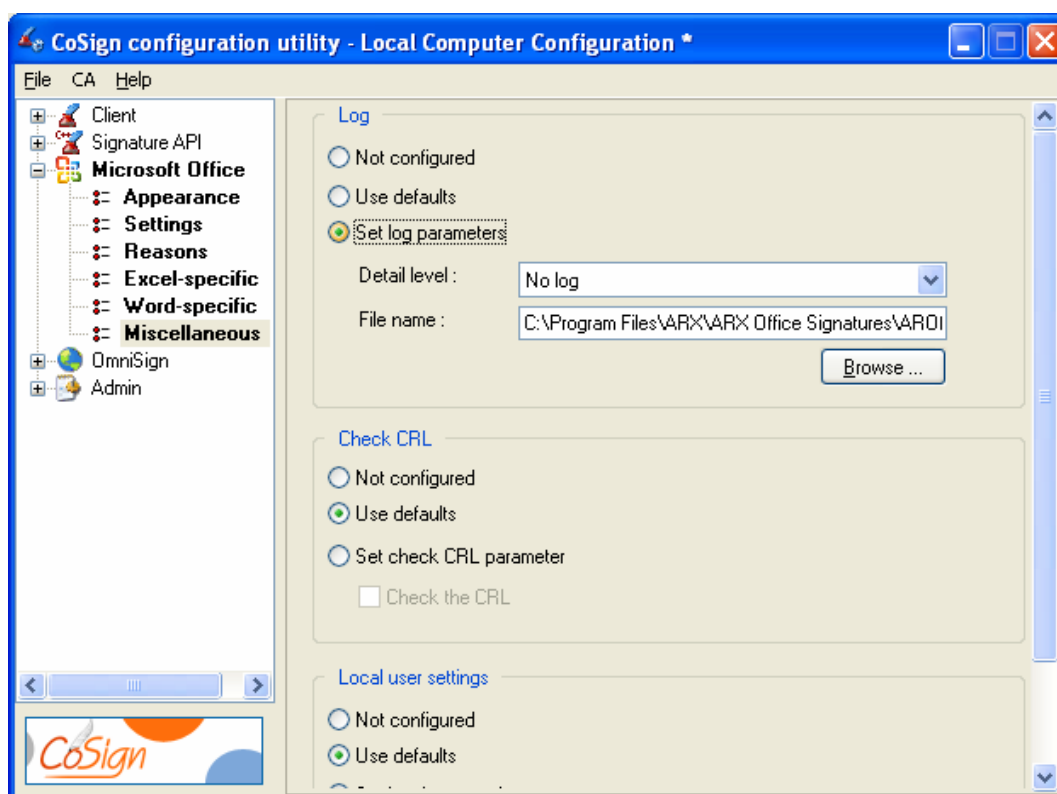




Figure 121 Configuring Microsoft Office – Miscellaneous Parameters

In the **Miscellaneous** group you can set the following Microsoft Office parameters:

- ◆ **Set log parameters** – You can set the following logging parameters:
  - ◆ **Detail level** – The reporting level to the log.
  - ◆ **File name** – The path for the Microsoft Office log file.
- ◆  **Note:** *Changing the logging parameters can extensively degrade the performance of the client. It is therefore recommended not to change the logging parameters unless instructed to do so by ARX technical support.*
- ◆ **Check CRL** – You can set the following CRL (Certificate Revocation List) parameters:
  - ◆ **Check the CRL** – Determines whether to check the CRL when verifying a digital signature.
- ◆ **Local user settings** – You can set the following local user settings:
  - ◆ **Enable local user settings** – Determines whether to enable a user to set his/her own settings through any of the supported Microsoft Office applications' GUI. If this option is not checked, the configuration settings are always taken from the local machine.
- ◆  **Note:** *If a user sets his/her own settings, an attempt to distribute a centralized managed setting will not succeed, and the user will keep using his/her own configuration.*

## Setting OmniSign Configuration

OmniSign enables you to print and sign any document of any format. It includes both a special printer that converts the file to PDF, and an application that signs the PDF file. OmniSign configuration enables you to set parameters related to the signing application but not to the printing operation.

OmniSign configuration is composed of the following groups:

- ◆ **Profiles** – In this group you can set the appearance and location of the signature, which application to run after signing, where to save the signed file, and whether to run in silent mode.
- ◆ **Miscellaneous** – In this group you can set logging parameters.

For more information on using OmniSign, refer to [Chapter 6: OmniSign – Sign Any Printable Data, Anywhere](#).

### OmniSign – Profiles

This group enables you to set the parameters of the standard OmniSign profile (currently this is the only profile supported). The profile parameters affect the signature appearance, its location, which application to run after signing, where to save the signed file, and whether to run in silent mode.

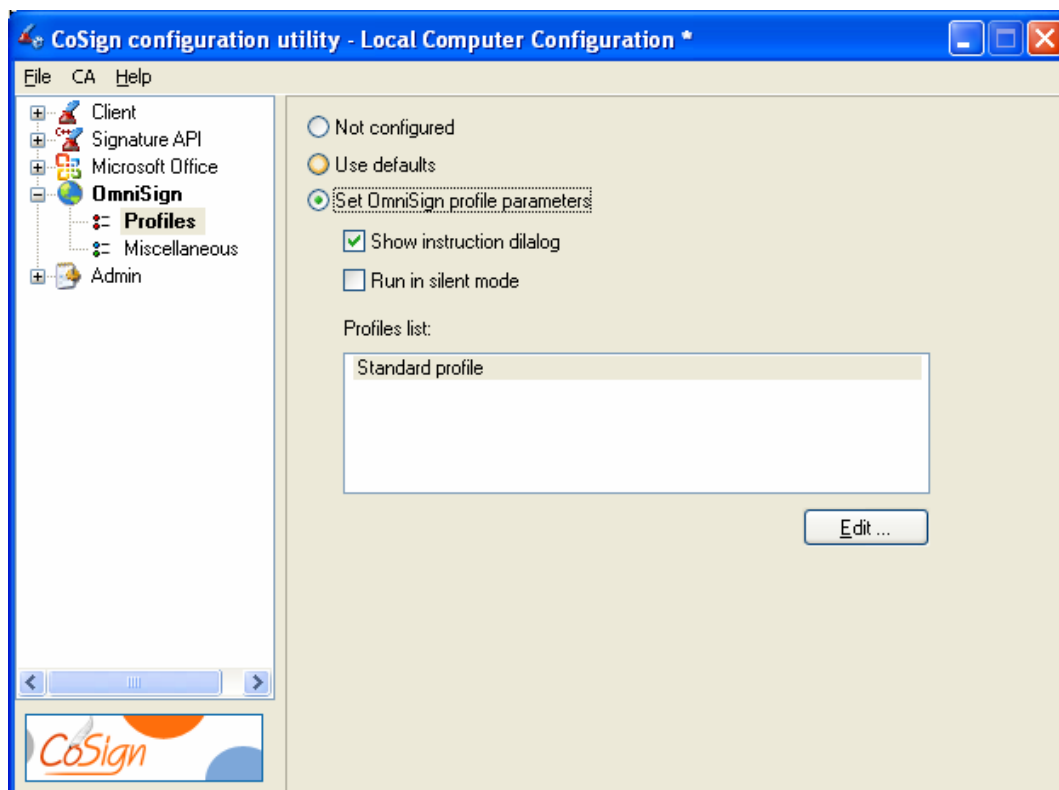


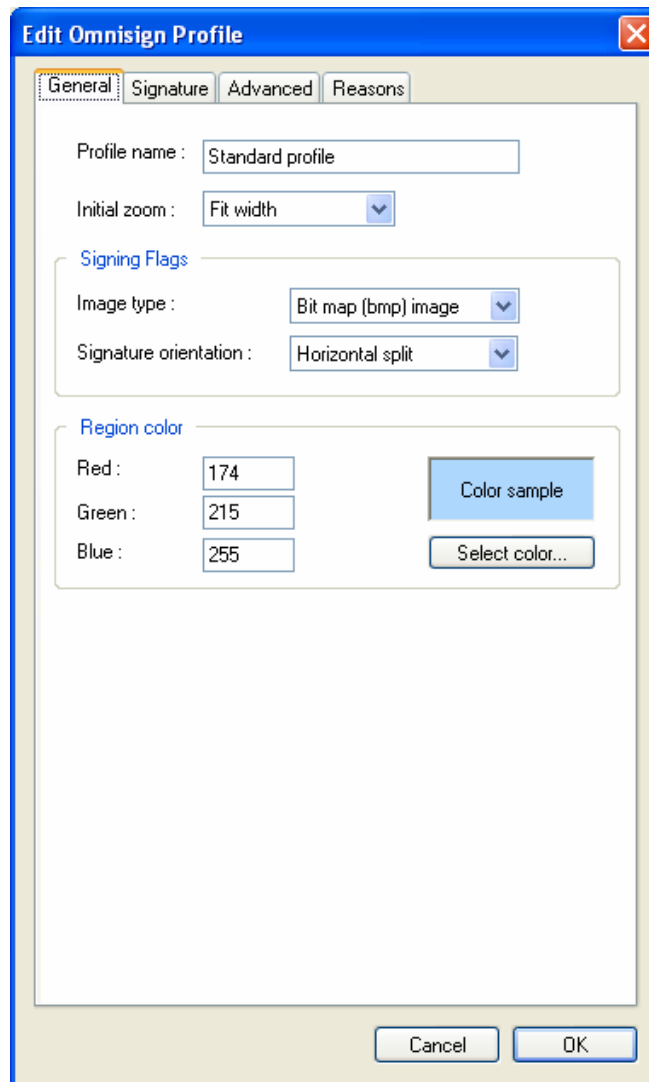
Figure 122 Configuring OmniSign – Profiles Parameters

In the **Profiles** group you can set the following OmniSign parameters:

- ◆ **Show instruction dialog** – Specify whether to display instructions for using OmniSign whenever the application starts.
- ◆ **Run in silent mode** – Specify whether to run OmniSign in silent mode. When running in silent mode, OmniSign has no interface to the user and all the relevant parameters must be set in advance, either via the CoSign Configuration Utility or via ARX OmniSign Setup.
- ◆ **Profiles list** – A list of pre-configured profiles. Currently only the standard profile can be edited. Click **Edit** to edit the settings of the standard profile. The Edit OmniSign Profile dialog box appears ([Figure 123](#)), with the following tabs:
  - ◆ **General** – This tab cannot be edited in the OmniSign application itself, and is described below (refer to [Editing a Profile's General Settings](#)).
  - ◆ **Signature** – This tab is described below (refer to [Editing a Profile's Signature Settings](#)). There are some parameters that can be set only through OmniSign. These parameters are explained below and in [Configuring the Signature Settings](#).
  - ◆ **Advanced** – For explanations refer to [Configuring the Save Options](#).
  - ◆ **Reasons** - This tab cannot be edited in the OmniSign application itself, and is described below (refer to [Editing a Profile's General Settings](#))

### *Editing a Profile's General Settings*

The **General** tab enables you to set the parameters affecting the zoom value, graphical image format, signature appearance, and color of the signature rectangle.



*Figure 123 Configuring OmniSign – General Profile Parameters*

In the **General** tab of the **Profile** group you can set the following OmniSign parameters:

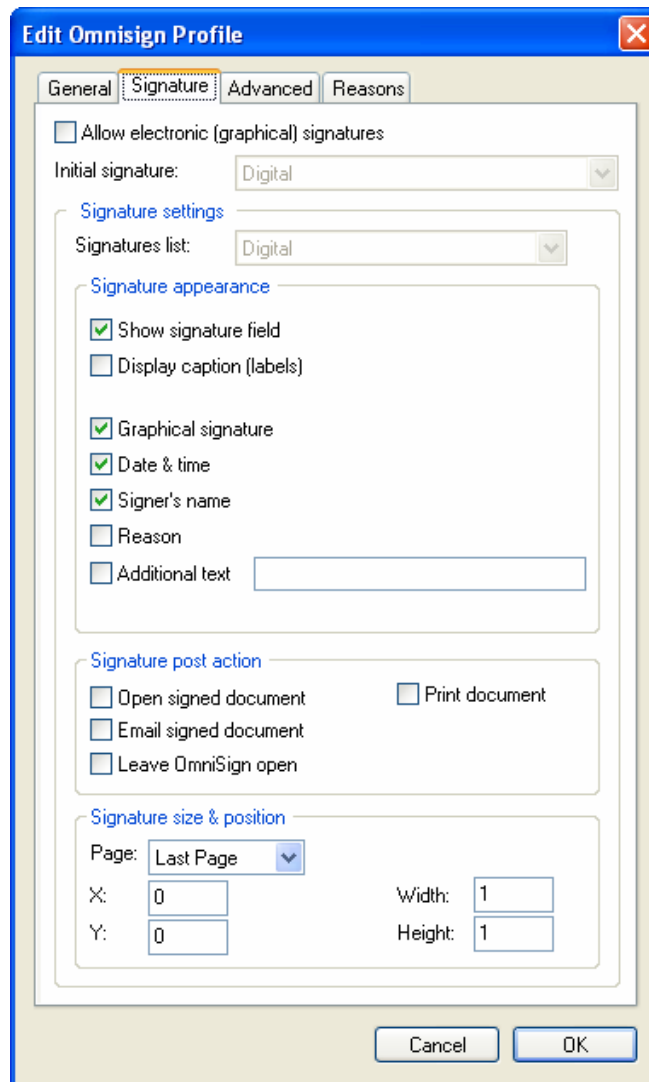
- ◆ **Initial zoom** – The zoom value to be used when opening the document in the preview pane.
- ◆ **Signing Flags** – You can set the following parameters:
  - ◆ **Image type** – Specify the graphical image format. You can select one of the following options:
    - ◆ **Bit map (bmp) image** – The graphical image is stored in the document as a bitmap.
    - ◆ **Line vector** – The vectorial representation of the graphical image is stored in the document.
  - ◆ **Signature orientation** – Specify how to organize the fields in the signature appearance. You can select one of the following options:

- ◆ **Vertical split** – The graphical image or signer’s name appears in the left half of the signature field, and the rest of the fields appear in the right half.
- ◆ **Horizontal split** – The graphical image or signer’s name appears in the top half of the signature field, and the rest of the fields appear at the bottom.
- ◆ **Region color** – Specify the RGB values of the rectangle which indicates the location and size of the signature:
  - ◆ **Red** – Specify a value between 0 and 255 for the red color in the rectangle’s color.
  - ◆ **Green** – Specify a value between 0 and 255 for the green color in the rectangle’s color.
  - ◆ **Blue** – Specify a value between 0 and 255 for the blue color in the rectangle’s color.
  - ◆ **Select color** – You can use this button to select a color from a color palette. The values in the **Red**, **Green** and **Blue** fields are automatically updated.

### *Editing a Profile’s Signature Settings*

This tab enables you to set the signature settings in OmniSign.





*Figure 124 Configuring Omniscan – a Profile’s Signature Parameters*

In the **Signature** tab of the **Profile** group you can set the following Omniscan parameters:

- ◆ **Allow Electronic (Graphical) Signatures** – Select this option if you wish to enable adding an electronic signature before adding a digital signature.
- ◆ **Signature List** – Select from the list the default signature type to appear in Omniscan.

The descriptions of the rest of the parameters appear in [Configuring the Signature Settings](#).

### *Editing a Profile’s Reasons Settings*

In the **Reasons** tab of the **Profile** group you can define the set of reasons that can be used by the Omniscan application.

- ◆ Use **Add** to add a reason from the **optional reasons** box to the list of reasons.
- ◆ Use **Remove reason** to remove a reason from the list of reasons.

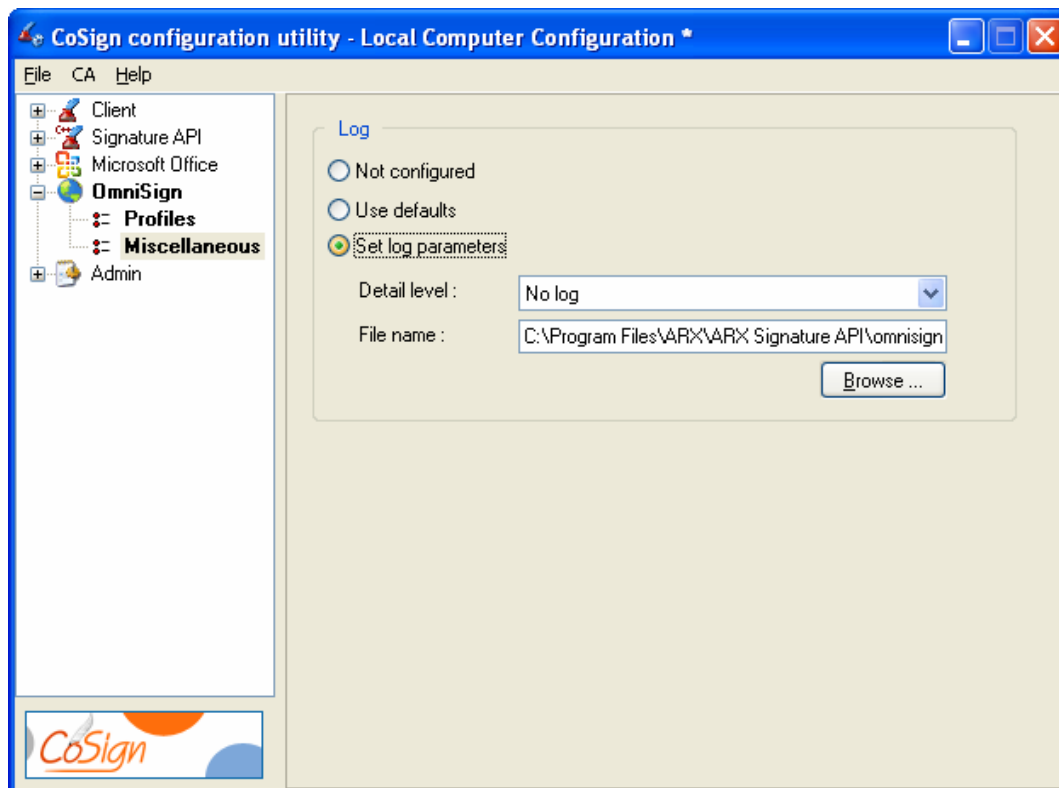
- ◆ A reason will be used as default the next time OmniSign is executed if you enter that reason in the **signature reason** field or click **Use This Reason**.

## OmniSign – Miscellaneous

This group enables you to set the logging parameters in OmniSign.



**Note:** *Changing the logging parameters can extensively degrade the performance of the client. It is therefore recommended not to change the logging parameters unless instructed to do so by ARX technical support.*



*Figure 125 Configuring OmniSign – Miscellaneous Parameters*

In the **Miscellaneous** group you can set the following OmniSign parameters:

- ◆ **Log** – You can set the following logging parameters:
  - ◆ **Detail level** – The reporting level to the log.
  - ◆ **File name** – The path for the OmniSign log file.

---

## Chapter 11: Troubleshooting

This chapter offers solutions to various problems you may encounter while installing or running CoSign.

If you are unable to identify or solve a problem, contact ARX Support:

### ARX Support

#### US Headquarters

341 First Ave. South  
Pleasant Hill,  
CA 94523

Tel: : (925) 798 0901  
Fax : (925) 226 1982  
Toll Free : (877) 999 6667  
Support : (866) EASY-PKI

#### Canadian Office

447 Mullen Dr.  
Thornhill,  
ON L4J 2N9

Tel : (905) 763 2122  
Fax : (905) 763 6122  
Toll Free : (877) 754 3744  
Support : (877) PKI-E-SIG

Email address: [support@arx.com](mailto:support@arx.com)

Web site: <http://www.arx.com>

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## Client-Related Problems

This section describes various problems and error messages you may encounter while running the CoSign Client, and provides possible solutions to these problems.

### Cannot Enable the “Add Digital Signature to Outgoing Messages” Checkbox in Outlook

**Problem:** In Microsoft Outlook, the **Add digital signature to outgoing messages** checkbox is disabled.

**Solution:** In order to send signed emails, you must first define security settings. Refer to [Configuring Outlook](#).

### Cannot See Any Certificates in Store

**Problem:** You cannot see any certificates in your Microsoft Personal certificates store.

**Solution:** Perform the following:

1. Restart the machine and try again.
2. Verify the following:
  - ◆ You are logged in to the same domain as CoSign. You should not be logged in to any other domain, and you should not be logged in to the current machine.

- ◆ Your DNS definitions are correctly configured on the PC. These definitions should be the same as the domain's DNS.
- ◆ You receive a response when you ping the CoSign IP address or try to connect to CoSign using telnet to port 443.
- ◆ Your user account is defined in the directory that was defined as the AD users container during CoSign installation (refer to the chapter *Managing the CoSign Installation* in the *CoSign Administrator Guide*).
- ◆ If you are using a Directory Independent environment, you did not omit to set configuration parameters for the client machine. Use the **Cosign Configuration Utility** to setup the CoSign appliance IP address (refer to [Client – Appliances](#)).

### Cannot Create a Digital Signature Field Using the ARX Legacy Add-in

**Problem:** You cannot generate a signature field since Word or Excel cannot switch to Design Mode.

**Solution:** Check the following:

- ◆ Check whether the *Visual Basic for applications* component is installed. If it is not installed, install it from the Office installation CD.
- ◆ Make sure the ARX plug-in is not disabled in Office applications:
  1. Select **About... > Disabled Items** in the **Help** menu of the Office application.
  2. If the ARX Signature add-in is listed, remove it from the list.
- ◆ Check whether **Enable Automatic Verification** is unselected in the **Settings** tab of the **Microsoft Office** section of the CoSign Configuration Utility. If it is selected, deselect it.

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