MANCHESTER
1824

Software Installation Guide

Release 2.9

Versions 150 onward

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Disclaimer

Whist all reasonable efforts have been made to ensure that the technology upon which these programs are based is valid. CPI/The University of Manchester gives no warranty in respect hereof, and shall not in any way be liable for the existence of errors, or for the results of the application of these programs to any practical application.

Introduction

Welcome to the Process Integration software suite. This release includes: -

Main Packages

- **STAR**   Utility system simulator (steam system) , basic and site targeting.

- **SPRINT**   Heat exchanger network simulator and optimiser.

- **AZEO**   Azeotropic distillation analysis.

- **ColSEQ**   Column sequencing.

- **ColPROF**   Column targeting.

- **ReactBCH**   Batch Reactor network simulation and optimisation.

- **ReactCAT**   Reactor catalyst simulation and optimisation.

- **ReactKIN**   Reactor kinetics network simulation and optimisation.

- **ReactNET**   Reactor network simulation and optimisation.

- **HYDRO**   Refinery Hydrogen system design and optimisation.

- **WATER**   Water minimisation and treatment system design and optimisation.

- **WORK**   Refrigeration systems and exergy analysis.

Utilities

- **KEY VIEWER**   License manager utility
- **Component Editor** Physical properties interface and investigation
- **ASPCONV**   Column profile interface tool for Aspen+
- **ASPDIAG**   Diagnostic utility to test configuration of CPI Aspen+ interface
- **HYSCONV**   Column profile interface tool for Hysys
- **ScreenCam**   Runtime Player for help video files

Depending on your licence agreement you may have access to all or only some of these applications. If you are not licensed to use the entire suite you may wish to choose a Custom installation, as described below, to avoid installing unnecessary files onto your computer.

The remainder of this document describes system requirements and gives detailed installation instructions. Help on using the individual programs can be found in each program's on-line help system by selecting **Help/Contents** from the main menu or pressing the **F1** key.

System Requirements

Although the software will run on lower specification computers, the minimum recommended system requirements are: -

- 500MHz, processor, or faster.

- 256 Mb of main memory.

- Screen resolution of 1024Wx768 H

- Approximately 300MB of disk space for a full installation. This can be reduced if you choose not to install all of the individual components.

- Microsoft Windows 98, Me, XP, NT, 2000, Vista, Win 7 (32 & 64 Bit), Win 8/8.1, Win 10. It has been observed that the packages work on Apple Mac OS when using VMware to run Microsoft windows but this is unsupported by the centre.

Contact information

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Installation

Stand-alone Installation – All applications

This assumes that you are installing the application on a local hard drive and have sufficient access right to perform the installation.

Use Windows Explorer to run the installation image file **setup_cpi_v2_9_???.exe**, and follow the on-screen instructions. If you have limited access rights on your user account you may have to run the install image by right clicking the imanage file and select the "Run as administrator" option

Important Note: If this is an interim update release (i.e. you are installing over an existing installation with the same version number), you will first need to uninstall the existing version. In Windows Control Panel click on **Add/Remove Programs**, scroll down to the **Process Integration** entry, and click the **Add/Remove** button. Follow the on-screen prompts to remove the existing version. This step is not necessary if your existing installation has an older version number (for example if you are installing version 1.5 over version 1.5Beta).

Setup Types

During the installation you will be asked to choose between **Full**, **Compact** or **Custom** setup types. If your licence does not cover the entire suite you are advised to choose a **Custom** setup and to deselect those applications that your licence does not cover.

Full   All files will be copied to your computer, including the workshop files, demonstration files, visual demonstrations, technology overview slideshows and the file conversion utilities. A full installation will occupy approximately 220MB. This is the recommended setup type unless you are short of disk space, or your licence doesn't cover all of the programs.

Compact   Only the programs and demonstration files will be installed, occupying approximately 70MB. The workshop files, visual demonstrations and technology overview slideshows will not be installed. This setup type is recommended if you are short of disk space.

Custom   You may choose which features to install. This setup type is recommended if your licence does not cover all of the individual packages, or if you only want to install a selection of the packages.

After the Installation

At the end of the installation procedure a new Program Folder will be added to your **Start** button. This will contain: -

- Your choice of installed software.

- **Key Viewer** - a program to manage your key file. The remaining programs will not run until you have a valid key file.

- A **User's Guide**, which provides an overview of features common to all of the programs. The User's Guide is in Adobe Acrobat (PDF) format. The latest version of Acrobat Reader may be downloaded from the Adobe website at **http://www.adobe.com**.

Default files locations:

Program files (x86)\CPI Suite\	Default user initialisation file (**CPIsuite.ini**)
	Default License file (**CPI.KEY**) – This location can be configured in the applications
Program files (x86)\CPI Suite\<app_version>\Bin	Applications folder
Program files (x86)\CPI Suite\<app_version>\Help	Help files – This location can be configured in the applications
Program files (x86)\CPI Suite\<app_version>\Help\Videos	ScreenCam player and video files
Program files (x86)\CPI Suite\<app_version>\Help\Lectures	Technical presentations in PDF format
Program files (x86)\CPI Suite\<app_version>\Lex_Data	Language dependent file
Program files (x86)\CPI Suite\<app_version>\Docs	Installation and user guides (PDFs)
Program files (x86)\CPI Suite\<app_version>\\Examples	Example files for each application – This location can be configured in the applications
Users\<username>\CPI	User Initialisation and configuration files
Windows\temp	Temporary file locations for reports/ calculations/ diagnostics etc. – This location can be configured in the applications

Stand-alone Installation – Single application

This assumes that you are installing the application on a local hard drive and have sufficient access right to perform the installation.

Use Windows Explorer to run the installation image file **setup_star_v2_9.exe**, and follow the on-screen instructions. If you have limited access rights on your user account you may have to run the install image by right clicking the imanage file and select the "Run as administrator" option

Default file locations:

Program files (x86)\CPI Suite\	Default user initialisation file (**CPIsuite.ini)** Default License file (**CPI.KEY**) – This location can be configured in the applications
Program files (x86)\CPI Suite\<app_name_and_version>\Bin	Applications folder
Program files (x86)\CPI Suite\<app_name_and_version>\Help	Help files – This location can be configured in the applications
Program files (x86)\CPI Suite\<app_name_and_version>\Help\Videos	ScreenCam player and video files
Program files (x86)\CPI Suite\<app_name_and_version>\Help\Lectures	Technical presentations in PDF format
Program files (x86)\CPI Suite\\<app_name_and_version>\Lex_Data	Language dependent file
Program files (x86)\CPI Suite\<app_name_and_version>\Docs	Installation and user guides (PDFs)
Program files (x86)\CPI Suite\<app_name_and_version>\Examples	Example files for each application – This location can be configured in the applications
Users\<username>\CPI	User Initialisation and configuration files
Windows\temp	Temporary file locations for reports/ calculations/ diagnostics etc. – This location can be configured in the applications

If the programs looks small in Windows 10 high resolution displays

You need to change the default properties in the application shortcut. Right click the shortcut, choose *Properties*, then Compatibility, then tickbox "*Override high DPI scaling*" and scaling performed by *System* in drop down box.

Application fail to start

If the application fails to start it may be due to insufficient privileges to access restricted area of the operating systems. If oy have administrative privileges you may need to set the application shortcut to run as administrator
Right click shortcut
Select properties
On the shortcut tab select "advanced"
Select "Run as administrator"

Language

If you are using a non-western language setting you may need to adjust your window language setting to use

WIN 10 : - Install the preferred language (if necessary)

Start\windows settings\time and language\language\Add a preferred language

As the applications are non-unicode, you may need to adjust the setting

Administrative language settings\administrative\change system locale

To the appropriate language

Win 7: - Install the preferred language (if necessary)

Start\Control panel\region and language\keyboards and languages\Install/uninstall languages

As the applications are non-unicode, you may need to adjust the setting

Start\Control panel\region and language\administrative\change system locale

To the appropriate language

License management

Activating the Software

Multi-user license

The software is protected by a security key file, **CPI.KEY** which you are supplied with separately. The default location for this file is <**Installation path>\CPI Suite.**

All the programs you are licensed to use should now run.

Single user license

If the license is specified as **"Single User"** (also referred to as a "single transferable license") then it has to be **"Locked"** to a given machine hardware. This involves generating a unique code for the target machine, and then getting a matching code to bind the license to the machine hardware.

The management of the license is performed using the **KeyViewer** application

For more details on the procedure please see the on-line help in KeyViewer for **Generating a Hardware Lock**

As the license is transferable, it first has to be removed from the source machine and then **"Locked"** to the target machine. For more details on the procedure, please the on-line help in KeyViewer see **Remove a Hardware Lock**

Note: - The applications do NOT have to be "uninstalled" to transfer the license to another computer but the applications will not function until a valid license is specified.

WARNING: The application(s) monitor the system date and time so if there is an inconsistency detected, the applications will not run until a reset code is obtained from CPI

You can change the contact information contain in the license to provide an in-organisation point of contact
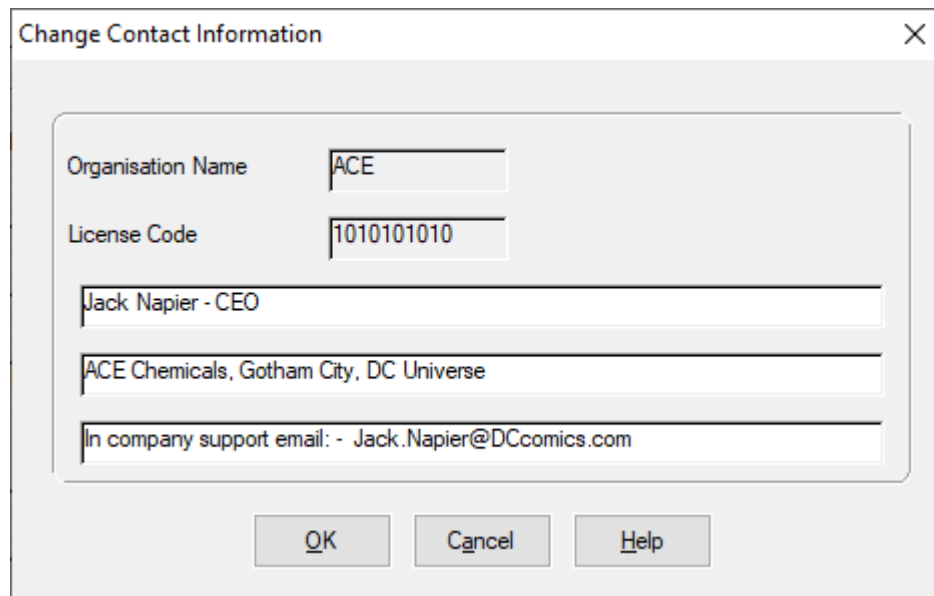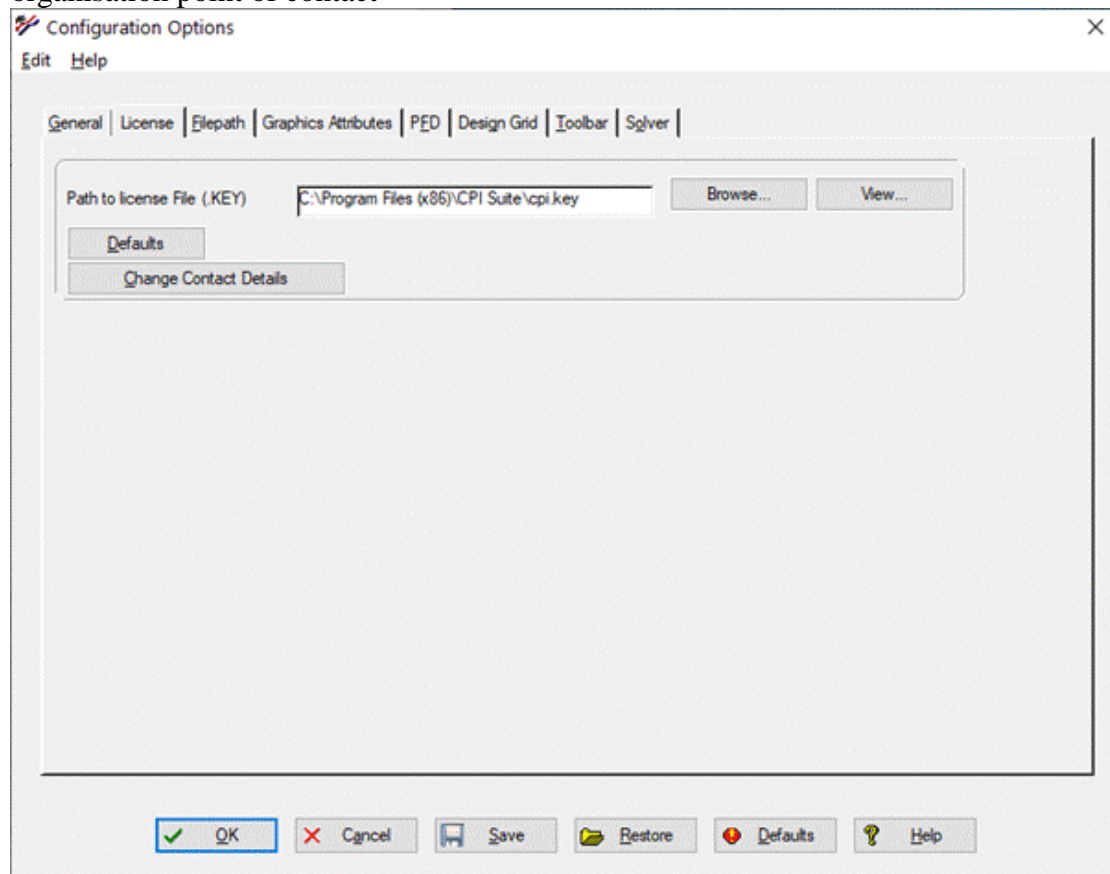
Network Installations

There is no direct support for network installations. The recommended method of installing to networks is to copy the installation image to a network drive, so that users may install the software on their own computer from the network. Alternatively, you may wish to install the software directly to a network server and have users run the software from the network. Please read through the instructions below before attempting to install the software to a network. The installtion is only valid for multi-user licenses as single user license must be "**locked**" to an individula computer

Installing from an Image of the Installation on a Network Drive

The four steps are:

1) Copy the Installation image to the network drive

Create a new folder on your selected network drive, (e.g. **m:\Cpi_setup**) and copy the installation image to this folder.

2) Copy/Save your key file on the network drive

You should use **Save As** to save the key file to your image folder on the network.

3) Install the software from the network to the client computer

Run **Setup** from the network folder, to install the software to the client computer.

4) Install the key file from the network to the client computer

Activate the software on the client computer by copying the key file from the network drive to the client computer.

All the programs you are licensed to use should now run.

Installing to a Network Drive

Following the instructions for a **Standalone** installation, install the software to a network drive, and create your key file. The key file will be saved on the network drive.

The software can now be run from any computer with access to the network, by double clicking on the executable file (in the **BIN** folder) from Windows Explorer. You may wish to create shortcuts on your computer – see your Windows documentation for details.

A known issue with installation on a network drive is that the on-line help files **(.CHM)** do not work correctly. This is due to a Microsoft releasing a security patch that makes it impossible to view CHM files that are stored on a network drive (as opposed to CHM files stored on your own computer). The help file will appear, but instead of the topic text you will see an error message "this page cannot be displayed".

The security patch and its effects are fully described on Microsoft's web site at http://support.microsoft.com/kb/896358

If you trust all the computers on your LAN or intranet (and the people using them), you can lower the restrictions on the Local Intranet zone to allow CHM files to be displayed with the following steps:

1. Click Start, click Run, type regedit, and then click OK.

2. Locate and then click the following subkey:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\HTMLHelp\1.x\ItssRestrictions

If this registry subkey does not exist, create it.

3. Right-click the ItssRestrictions subkey, point to New, and then click DWORD Value.

4. Type MaxAllowedZone, and then press Enter.

5. Right-click the MaxAllowedZone value, and then click Modify.

6. In the Value data box, type 1, and then click OK.

7. Quit Registry Editor.

If this solution does not work for you, please see http://support.microsoft.com/kb/896358 for alternatives.

Note to System Administrators

This software requires write access to a known location on the user's disk, to store the initialisation file (**CPIsuite.ini**) which contains the location of the security file and user preference settings. The software decides this location by searching first for the **%userprofile%** environment variable and, if this is not present, the **%windir%** environment variable. If write access is not available to either of these locations a program error will result.

If, when running the software, the initialisation file is not present in the specified location (as for example when running the software for the first time on a client computer, from a network) the initialisation file will be copied from the source folder of the executable. Typically, this will be the network server. It is therefore important that after installing the software to a network server, the key file is created before attempting to run the software on client computers. This will avoid having to re-enter the licence details on each individual computer.

When the software is installed is saves detailed about the installation folder into the default CPIsuite.INI file which is stored in the installation folder. When the software is started, it looks in the users data area (i.e.\documents and settings\<username>\CPI) for an CPIsuite.INI file. If it does not exist then a copy of the default file is taken and place in this folder for future use. If you are required to change the CPIsuite.INI file (i.e. shared drive letter/ location of license file/location of help file etc.) then these changes will not automatically be applied to the users' local copy. This can result in the users not accessing the correct file if modifications have been made. To correct this situation the user needs to either delete their local CPIsuite.INI file or copy the default CPIsuite.ini file using the option in **Preferences\Filepath\Path to .INI file\Get default INI file.**

Known Installation Issues

1. **Win 8/8.1-** Due to the lack of a "Start" menu, no icons or program integration program group is created during installation. Shortcut to the applications can be manually generated in the "Desktop" application by highlighting the relevant ".EXE" file in explorer and right dragging to the desktop area and on release of the right button select "Create shortcuts here"

2. Some users have reported that the software reports there is an issue with a valid license file (CPI.KEY). This is usually associated with the installation of a later version over an existing version. The problem seems to relate to there being two CPI.KEY files in the same folder, one visible and one invisible in windows explorer (This should not be possible in windows). Both file can be seem when the folder is accessed using cmd.exe or PowerShell. The application is accessing the "invisible version" hence the unexpected behaviour. The issues seems to be related to [localizedfilename] in desktop.ini and/or single user Vs. all users installation.

    To correct this behaviour

1. Delete both versions of the CPI.KEY file and then save the correct version to the folder
2. Save the CPI.KEY file using an alternative name (ie. CPI_NEW.KEY) to the installation folder or a folder that you have write privileges. Start an application, when the massage appears relating to invalid licence filee press the [continue] button. This should then open the preference dialogue the [license] tab. Enter the location of renamed license file (or use the [browse tool] . Once the license file is selected use the [Save] option on the main preferences window and then [Exit]. The application should now use the valid license file

Software Updates

From version 2.9-144 onwards the applications can check if there is an updated available. By default this happen automatically but if disabled (see Edit\Preferences\General\General Options\Check for update at start) the check can be performed manually by selecting **Help\Check for updates**. If an updated version of the application can be located (usually setup_xxxx_vz_x.zip), the user will be prompted for a location to store the installation file.

Please Note: - To install the latest version of the application you must have sufficient user rights (usually "administrator") and a valid Internet connection

## Visual Demonstrations and Technology Overviews

The help system makes use of Lotus ScreenCam™ to show with captions (and some cases audio), how to use various aspects of the software. There are also a number of technology overview slideshows, which introduce the various technologies used in the software.

Hardware Requirements

To make the most of the demonstrations you will need to be using a screen resolution of at least 800 x 600, and with 16 bit colour. In the case of demonstrations with audio, you will also need a Windows supported sound card attached to your computer, with either external loud-speakers or headphones.

Aspen Properties Interface Trouble shooter

When trying to use the Aspen Interface for the first time, the application may close with this error message:-
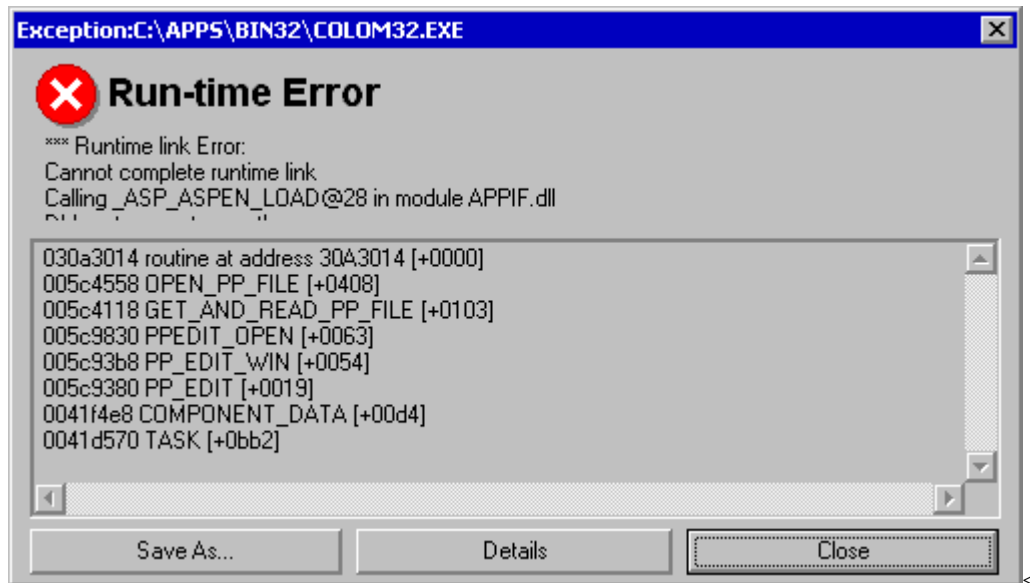
This occurs if the locations of the Aspen Toolkit files have not been added to your system path. To identify the files that are missing from the search path, run the **Aspen Interface Diagnostic Utility** (aspdiag.exe) located in the **Tools & Converters** group of your Process Integration software installation.
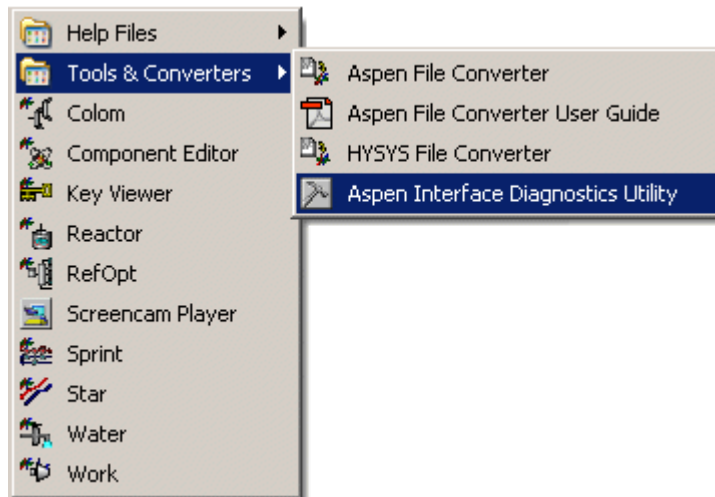
This will produce an error message identifying the first Aspen Toolkit file that can't be found:-
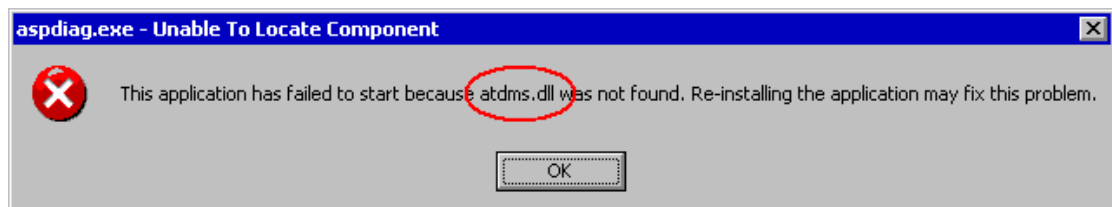

Use the Windows Search tool to search your computer or network for the relevant file within your Aspen installation, and make sure that its folder is included in your search path, i.e. your **Path** environment variable. (Please see your systems administrator if you are unsure of this step.)

The locations of the Aspen toolkit files will depend on your version of Aspen Plus, and where it has been installed. The following list of folders applies to a default installation of Aspen Plus 8.4 on a win - 64 system7

C:\Program Files (x86)\AspenTech\APrSystem V8.4\Engine\Xeq

C:\Program Files (x86)\AspenTech\OOMF V8.4\Xeq

It may be necessary to repeat this procedure two or three times for different DLL files, until running the diagnostics utility produces the following window:-
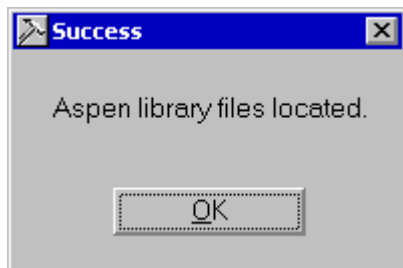
The interface should now work correctly, as described in the online help "**Using the Aspen Interface"**

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