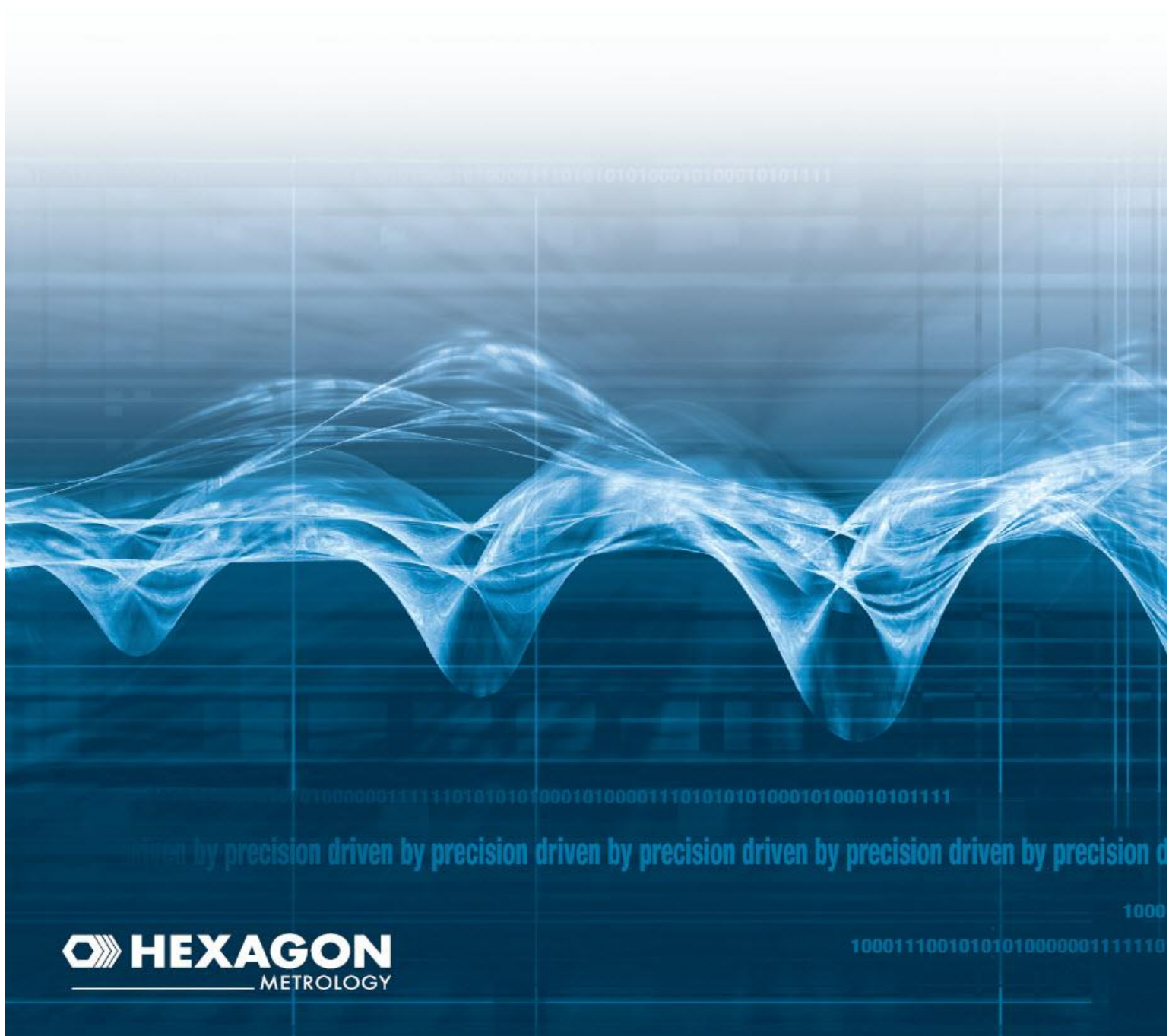


# pcodmis<sup>®</sup>

2012 Release Notes





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## Wilcox Associates, Inc.

# PC-DMIS® 2012 Enterprise Metrology Solutions - Release Notes -

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## 1. General System Requirements

### Minimum Requirements:

- PC-DMIS® 2012 operates under 32-bit and 64-bit XP; 32-bit and 64-bit Vista; and 32-bit and 64-bit Windows 7. (See info below on XP support. No other operating systems are supported.  
Note, however, that these PC-DMIS Vision hardware components do not support a 64-bit operating system:
  - Matrox Framegrabber
  - CMM-V probe
- Pentium-IV or higher processor is suggested.
- 2 GHZ XEON or Intel processor.
- 2 GB of RAM is recommended but significantly more may be required if working with large CAD models.
- 1 GB of free hard drive space minimum for the application.
- SVGA capable monitor.
- DVD drive.
- USB port available.
- The computer must have a graphics card that supports OpenGL shading. We cannot specify an exact graphics card since every user has varying needs. However, Nvidia is the preferred graphics vendor for PC-DMIS.
- Nvidia GeForce video cards are not recommended for use with PC-DMIS.
- This is defined as a "gaming" card according to Nvidia Engineering.
- Supports a screen resolution of 1280 x 1024 or higher.
- RTF file output requires Microsoft Word to be viewed.
- Microsoft® .NET 4.0.
- Internet Explorer versions 6, 7, or 8 (IE 9 contains a known issue where links to certain embedded files in the help file cause a crash).

### Recommended Minimums:

- PC-DMIS® 2012 operates under 32-bit and 64-bit XP; 32-bit and 64-bit Vista; and 32-bit and 64-bit Windows 7. (See info below on XP support.) No other operating systems are supported.  
Note, however, that these PC-DMIS Vision hardware components do not support a 64-bit operating system:
  - Matrox Framegrabber
  - CMM-V probe
- 2 GHZ or higher Duo-Core processor for improved performance.
- 4 GB of RAM or higher. More RAM may be required if working with large CAD models. You should have RAM equal to 8 times the size of the largest CAD file you will use. (For example, if you use an IGES model of 250 MB, then 2 GB RAM is recommended.)
- 2 GB of free hard drive space plus allocated Virtual Memory of 8 times the largest CAD file used.
- SVGA graphics card that supports OpenGL shading and that has WHQL certified drivers. On board video card memory should be based on the size of CAD file being used.
- For use without CAD models, 64MB video memory.
- For small to medium CAD files (50-100 MB), 128 MB video memory. |

- For large CAD files (> 100 MB), 256 MB+ video memory. WHQL (Microsoft Windows Hardware Quality Labs) video drivers can be downloaded automatically when using the Windows Update software.
- SVGA capable monitor.
- DVD drive.
- 2 USB ports available.
- Microsoft® .NET 4.0.
- Internet Explorer version 8 (IE 9 contains a known issue where links to certain embedded files in the help file result in a crash).

**NOTE:** Depending on your specific needs, the recommended system specifications for this version of PC-DMIS may be much higher. A more substantial computer system may be required to accommodate part programs using Automation or complex Reporting objects. Be sure to consult with your PC-DMIS distributor to find out the type of computer system you will need in order to run this software at its optimum capability.

**IMPORTANT:** When using 3rd-party drivers you should contact your local Hexagon representative to ensure Operating System compatibility.

**ANTI-VIRUS SOFTWARE:** The Sophos® Anti-virus tool was used by Wilcox Associates Inc. while testing PC-DMIS. The performance of any other anti-virus tool will need to be confirmed by the user. <http://sophos.com/products/enterprise/endpoint/security-and-control/>.

**INSPECTION PLANNER:** You may need to recreate the IPD file for needed parameters so imported Inspection Plan items are created correctly.

**WINDOWS XP SUPPORT:** Beginning with v2010 MR1, we are starting to phase out our support of the Windows XP operating system. While this version likely runs fine in XP, it was not explicitly tested in XP.

#### **Flashing Issue when the F9 key is pressed for the Edit a Loadprobe command**

An issue has been found with PC-DMIS where the OpenGL setting error flashes when the F9 key is pressed for the Edit Loadprobe command.

This has been determined to be a hardware issue when two video cards are simultaneously enabled on the system running PC-DMIS.

To resolve this issue:

- Update to RDS 3.3
- Ensure firmware is version 1.2
- Disable Intel (onboard) graphics
- Update NVIDIA driver.

## 2. Installing PC-DMIS

To install the application follow these steps below:

### Step 1: Check System and Hardware Requirements

Ensure your computer system meets the minimum system requirements. Before you attempt to install a new PC-DMIS version, ensure that you meet the system and hardware requirements. You must also have a USB portlock for the installation to work. Your IT person can help you with this.

- To get your computer's properties, highlight the **My Computer** icon, right-click on it, and select **Properties**.
- To check the display properties for the graphics card, select **Start | Settings | Control Panel**, and then select **Display and Settings**.

### Step 2: Login as an Administrator

To install and run your new PC-DMIS version for the first time, you must be logged in as a user with Administrator privileges.

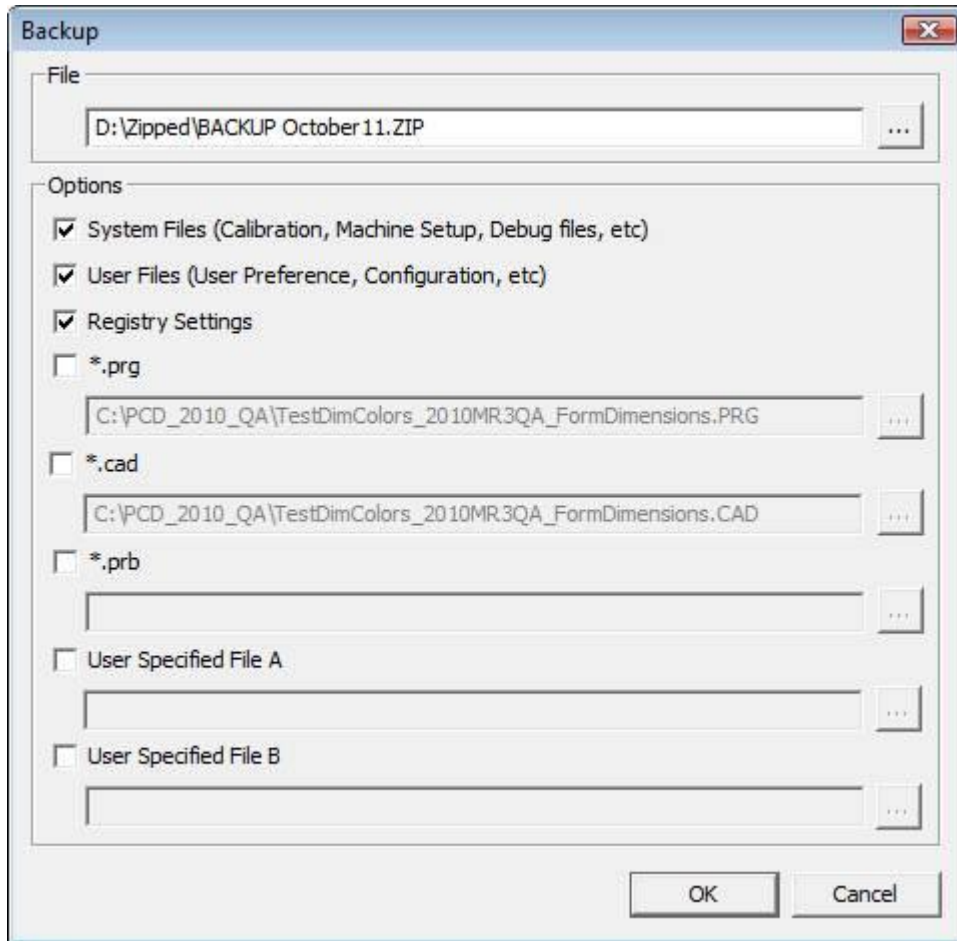
### Step 3: Back Up Existing Settings and Layout Data Files

Backup your settings and layouts files from your previous version.

- *If your current version is earlier than version 3.5*, back up your pcdlrm.ini file. This file found in the Windows system directory (either Winnt or Windows). Save a copy of the file in a safe place.
- *If your current version is greater than version 3.5*, back up your PC-DMIS Settings Editor data.

To do this:

1. Access the PC-DMIS Program Group for your existing version and start the **Settings Editor**.
2. Click the **Backup** button (or **Export**). The **Backup** dialog box appears:

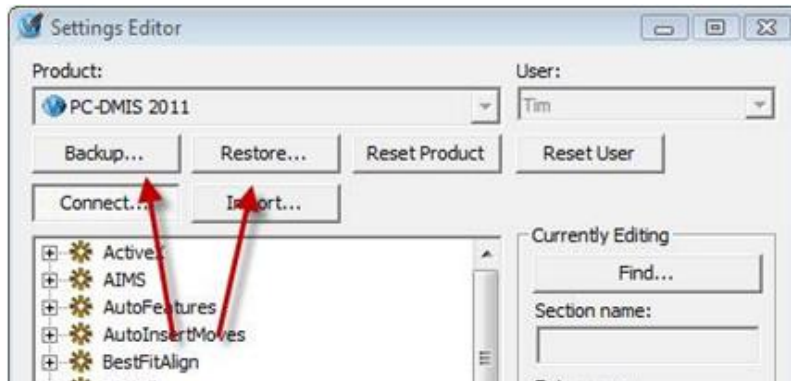


3. In the **File** box define a safe location to save the backed up files, and give the file a .zip extension.
  4. Mark the three top check boxes, and click **OK**.
- If your current version is greater than version 3.5, also backup the files that control the layout of PC-DMIS as well. These files will be in the \PCDMISW\

By default, PC-DMIS will attempt to migrate existing settings from previous installs on the same computer, even from really old versions of PC-DMIS where settings were stored in the pcdlnr.ini file.



If you are replacing your computer or transferring settings that reside on another computer, you can use the Settings Editor's **Backup** and **Restore** buttons:

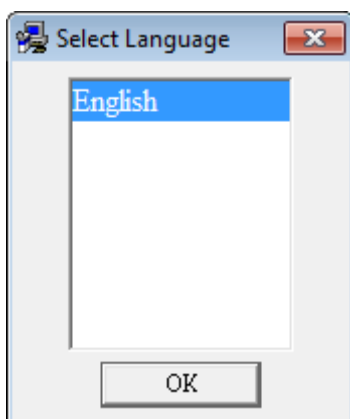


See the help file for the Settings Editor if you need more information on the backup and restore functionality.

#### Step 4: Install PC-DMIS

The following steps run you through a typical installation. Your installation screens may differ depending on whether or not you have an existing version of PC-DMIS. In addition, your USB portlock might be configured with different options.

1. Ensure your USB portlock is connected to your machine.
2. Locate the PC-DMIS install file on your installation media; or if you downloaded it, open the directory containing the downloaded file.
3. Double-click on the exe file to begin the installation process. If presented with a security warning, click Run.
4. A **Select Language** dialog box appears. Choose your language and click **OK**:

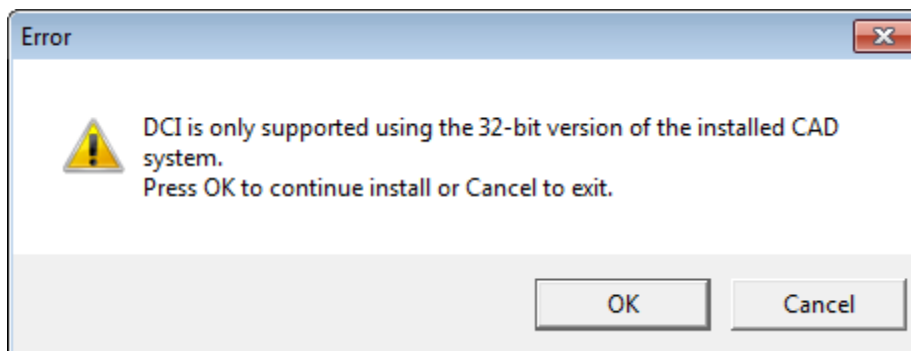




5. A **Welcome** screen appears. Click **Continue**:

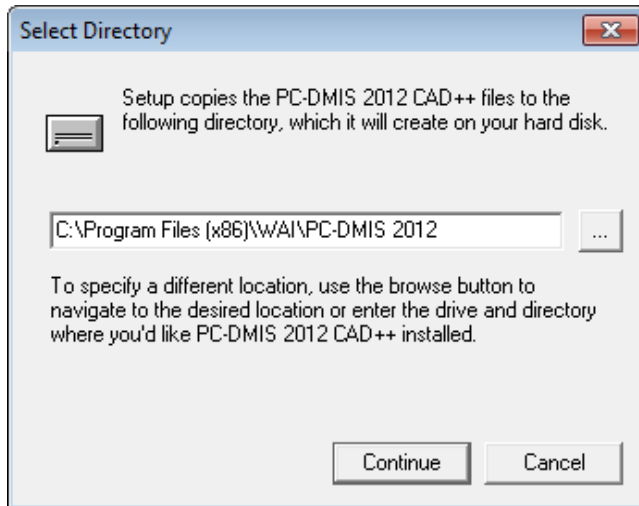


6. If you have a 64-bit machine, a message box may appear informing you that Direct CAD Interfaces (DCIs) only function with 32-bit CAD systems. If so, click **OK** to continue installing:




7. PC-DMIS will attempt to install any needed support tools. Follow any setup screens as needed.

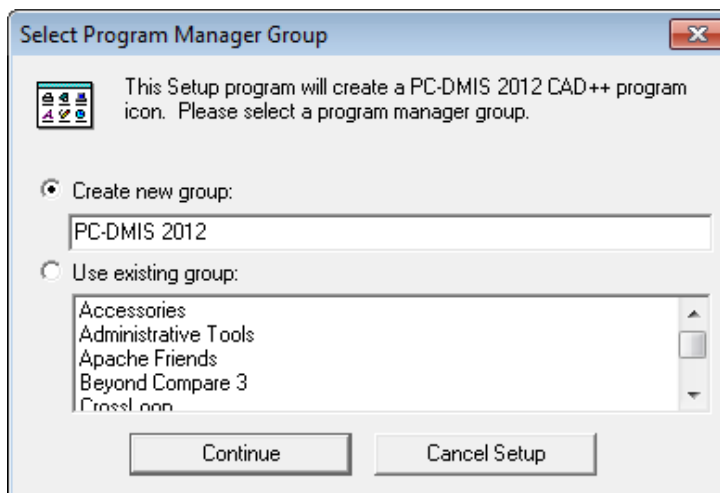
8. A **Select Directory** dialog box then appears showing the directory to which it will install PC-DMIS:



Unless modified, it will install to the C:\Program Files\WAI\PC-DMIS 2012\ directory on a 32-bit system and to C:\Program Files (x86)\WAI\PC-DMIS 2012\ on a 64-bit system.

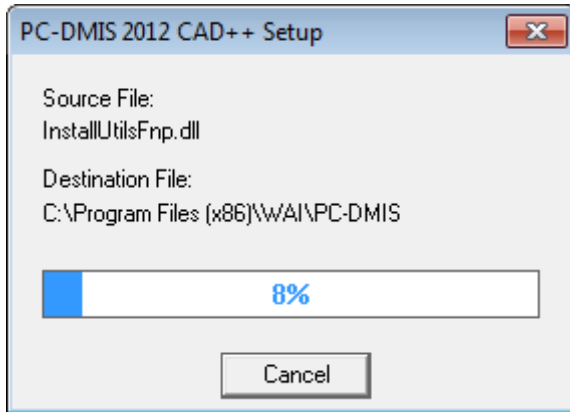
- Click the  browse button to choose a different installation directory.
- Click **Continue** to continue.

9. The **Select Program Manager Group** dialog box appears:

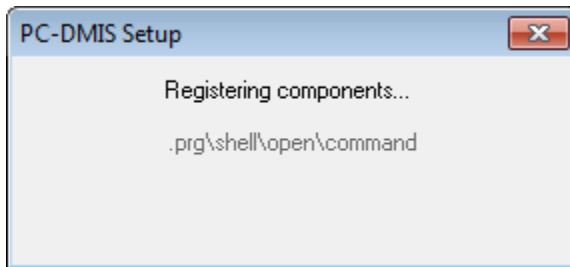


- To create a new program group, choose **Create new group** and type the new program group name in the box. Once installed, your shortcut icons will then appear under that program group name.
- To use an existing program group, choose **Use existing group** and then select the desired group from the list.
- Click **Continue** to start the actual installation of files.

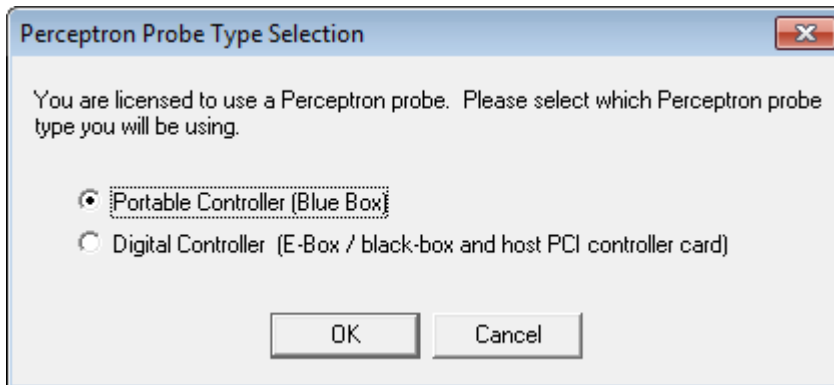
10. A progress bar appears in the **Setup** dialog box. You can click **Cancel** at any time to quit the installation.



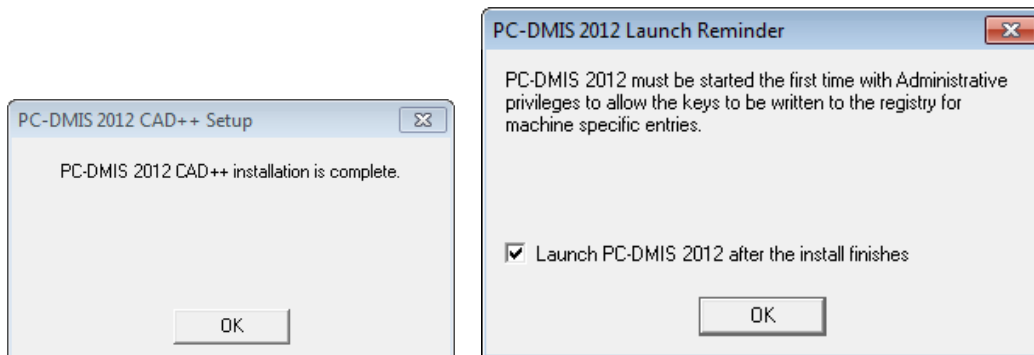
11. When the progress bar reaches 100%, PC-DMIS then registers needed components. You'll see a Registering components screen like this:



12. This may take a couple of minutes and may appear to not respond. Don't click the screen and let it finish registering.
13. During the registration phase, if you're licensed to use a laser probe, you may be presented with a screen similar to the following. Choose the desired probe type and click **OK**.



14. The installation finishes when you see these screens:



15. PC-DMIS is complete. Clear the **Launch PC-DMIS 2012 after the install finishes** check box if you are installing this version of PC-DMIS for the first time.

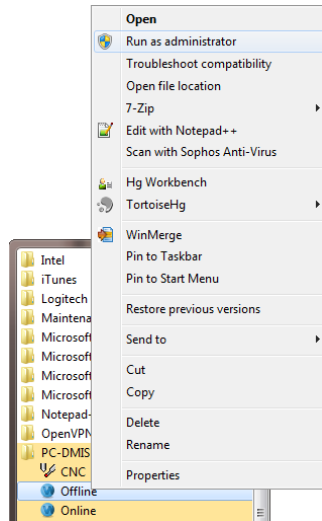
### Step 5: Copy Files after Installation

If available, copy these files from your old PC-DMIS installation into the directory where you installed the newer version:

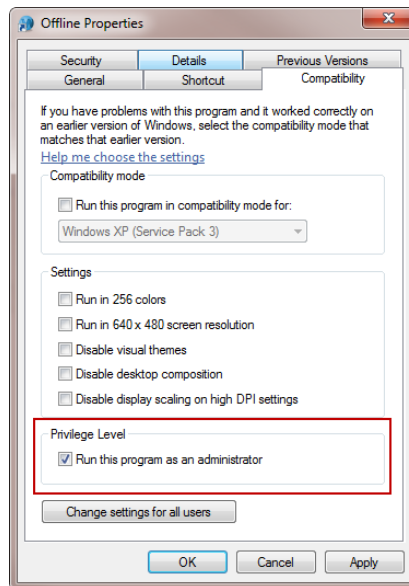
- downl.oad
- sysparam.dat
- comp.dat
- toolc.dat
- any other machine compensation files that are in your old PC-DMIS folder

## Step 6: Launch PC-DMIS for the First Time

1. When running PC-DMIS for the first time:
  - a. Click the **Start** button then **All Programs** and navigate to the installed version of **PC-DMIS**.
  - b. Right-click the **Online** or **Offline** option and click the **Run as Administrator** option if available.



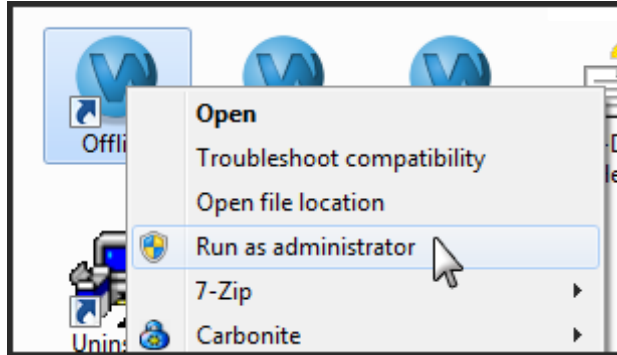
- If not available, select **Properties** and navigate to the **Compatibility** tab



- Check the **Run this program as an administrator** check box in the **Privilege Level** section and click **OK**.

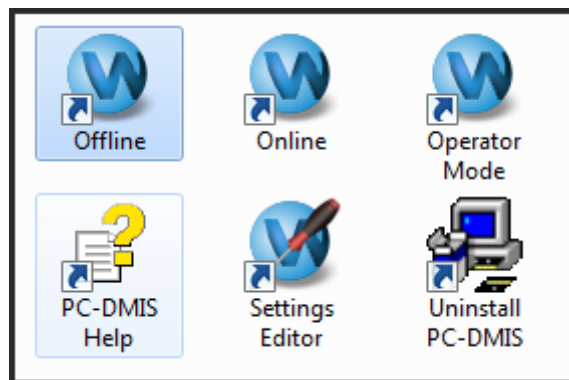
Another method is from the desktop shortcuts:

- a. Right-click either the **Online** or **Offline** desktop shortcut icon
- b. From the pop-up menu, select the **Run as Administrator** option:

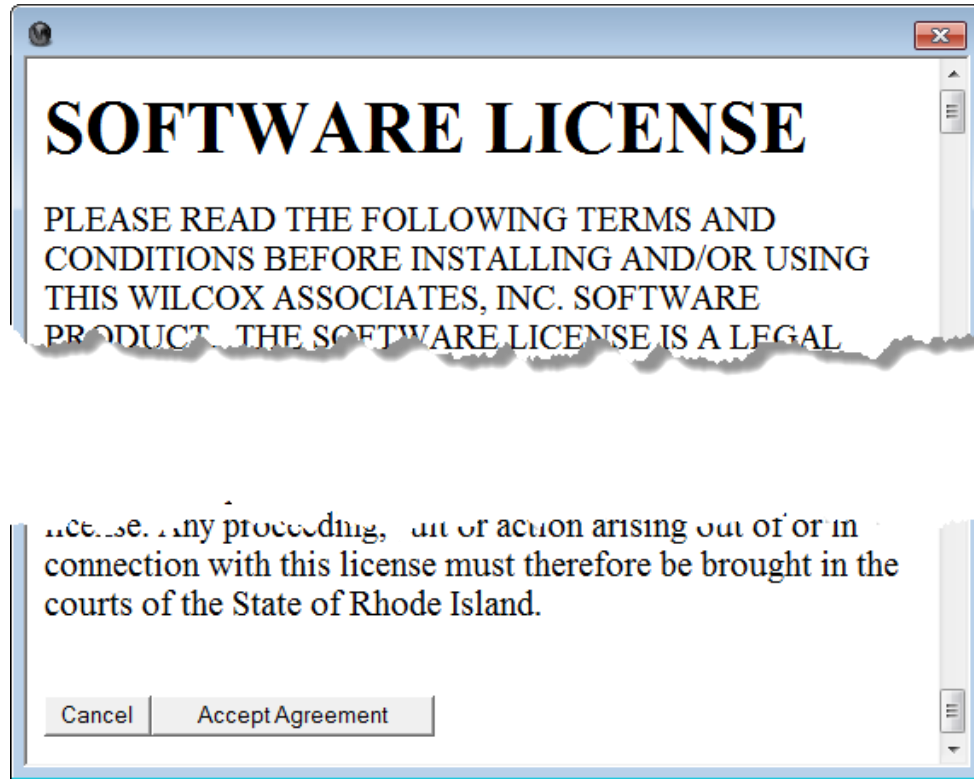


2. This allows the program to write needed machine-specific settings.
  - *If your previous version was earlier than 3.5*, PC-DMIS will ask if the settings in your PCDLRN.INI file should be used as your registry settings. Click **Yes** at the prompt. Otherwise PC-DMIS will load in the factory defaults.
  - *If your previous version was version 3.5 and later*, do the following to use your previous PC-DMIS settings:
    - a. Close down PC-DMIS.
    - b. Launch the **PC-DMIS Settings Editor** from the Program Group.
    - c. Once it opens, click **Import** and open the PCDRegFile.dat file you backed up in Step 3. PC-DMIS imports your settings.
    - d. Close down the **PC-DMIS Settings Editor**.

For subsequent startups, you can launch PC-DMIS normally by running the usual **Offline** or **Online** shortcut.



Once PC-DMIS starts, you'll be presented with a license agreement. Read and click **Accept Agreement** at the bottom to proceed:

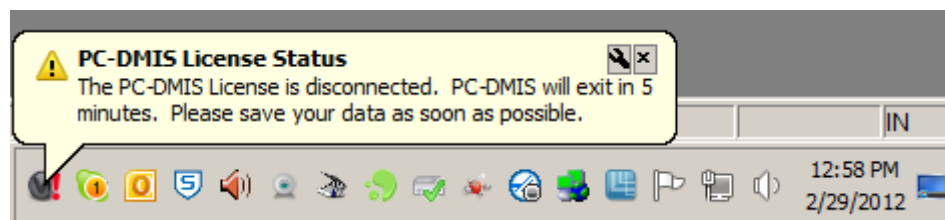


PC-DMIS will then load.

Once PC-DMIS is running, the following System Tray icon will be displayed. If the PortLock is programmed correctly, the icon will display a green check mark as shown below.



If the PortLock is not connected or not programmed correctly, the icon will have a red exclamation point overlaid on it and a pop-up message will be displayed as shown below. When PC-DMIS is in this state, it will continue to function normally, but after five minutes it will automatically close. Data should be saved immediately before this occurs.





### 3. Understanding File Locations

The default file locations (path locations) for various user-specific settings and other files have changed in PC-DMIS 2010 MR2 and later in order to comply with newer operating system standards. Previously, much of this information was stored inside of the install directory of PC-DMIS.

The following shows where these files are now stored based on each file's role:

#### System Files [Hidden]

- XP: C:\Documents and Settings\All Users\Application Data\WAI\PC-DMIS\
- Vista/7: C:\ProgramData\WAI\PC-DMIS\

Where <version> is the PC-DMIS version.

#### Shared Data Files [Hidden]

**Types of Files:** Calibration Files, Setup Files, and so forth.

- XP: C:\Documents and Settings\All Users\Application Data\WAI\PC-DMIS\<version>
- Vista/7: C:\ProgramData\WAI\PC-DMIS\<version>

Where <version> is the PC-DMIS version.

#### Shared Program Files

**Types of Files:** Part Programs, CAD, Probe Files, and so forth.

- XP: C:\Documents and Settings\All Users\Documents\WAI\PC-DMIS\<version>
- Vista/7: C:\Users\Public\Documents\WAI\PC-DMIS\<version>

#### User Data Files [Hidden]

**Types of Files:** Toolbar and Menu Layout Files; Lighting and Materials; Settings, and so forth.

- XP: C:\Documents and Settings\<username>\Local Settings\Application Data\WAI\PC-DMIS\<version>
- Vista/7: C:\Users\<username>\AppData\Local\WAI\PC-DMIS\<version>

Where <username> is your window's login user name and <version> is the PC-DMIS version.

Also see "Understanding the .DAT Files" in PC-DMIS help for more specific information on data files.

#### User Program Files

- Vista/7: C:\Users\<username>\Documents
- XP: C:\Documents and Settings\<username>\My Documents

Where <username> is your window's login user name.

**NOTE:** In addition, functionality was added into the PC-DMIS Settings Editor that allows you to backup, restore, or clear user-specific files and settings. Rather than manually deleting or restoring individual files on your own, we recommend that you use the tools provided in the Settings Editor instead. See the "PC-DMIS Settings Editor" documentation for additional information.

## 4. Information about this Release

We at Wilcox Associates are proud to bring you this new version of PC-DMIS® 2012. This Enterprise Metrology Solutions platform brings together new aspects of PC-DMIS® for the development of a complete manufacturing process control solution. Available in this release are variations of PC-DMIS® designed to assist with every aspect of the fabrication and quality control process. The newly created packages include PC-DMIS® Laser, PC-DMIS® NC, as well as the established PC-DMIS® Pro, PC-DMIS® CAD, and PC-DMIS® CAD++ platforms. Also included with this release is PC-DMIS® ONE, a simplified shop-floor DCC inspection package developed in cooperation with Brown & Sharpe.

The testing of this version has been significant. We'd like to take a moment to discuss this process and also make you aware of the various components of testing.

Testing is comprised of two parts. These can be described as functional testing and integration testing. The vast majority of testing effort goes on in the functional area. This is the testing that determines that specific functions that are core to the software, regardless of what type of machine is used, are working correctly. The integration testing is essentially a testing of the interface with a particular type of machine.

In the ideal scenario, WAI would have access to at least one of every piece of hardware that is operating in the field running PC-DMIS®. However, in practical terms, this is impossible. This integration test plan is then performed on as many types of machines as we have available.

Unfortunately, there will inevitably be machines to which we do not have access and that cannot be fully tested in this manner. To this end we have made an effort at closing this gap by partnering with our customers through the Beta Test Program. On our web site you will find an application for this program here: [http://www.wilcoxassoc.com/usersarea/beta\\_test\\_application.php](http://www.wilcoxassoc.com/usersarea/beta_test_application.php). We urge you to consider signing up for the program as it provides the mutual benefit of helping us create the best product possible for you, our customer.

Should you experience problems with your system after installation of PC-DMIS® 2011 MR1, it could possibly be an integration problem. If it is a problem of this nature, it will probably be evident immediately upon first use of the possibly untested configuration. Should such a problem materialize, you will be given the highest priority for correcting these problems. Please call Tech Support immediately to report any integration problems.

For existing users of PC-DMIS who currently have earlier versions of PC-DMIS® installed, it is advised that PC-DMIS® 2012 be installed into a new directory. In this way, you can be assured of continuous use of the existing version should problems arise with this newer version.

## 5. New Product Information

**NOTE:** EMS products remain in Early Adopter stage until formal release of each is announced.

- WAI Toolkit allows for the creation of custom commands in PC-DMIS.

Important 2D Distance Change: In PC-DMIS v2010 and later the 2D Distance dimension and the DIST2D expression have changed somewhat; they no longer use the workplane as part of the calculation when the third argument is set to a plane and the distance is being calculated perpendicular to the third argument ("perpendicular to" is always used by the DIST2D expression).

See the "2D Distance" and "Pointer Expressions" topics in the help file for more information.

### Major Enhancements

#### 2012 Major Release

- ClearanceCube – Adds protective envelope around the part for single-arm machines
- Configurator (Hotswap) – Adds the ability to switch to different configurations on the fly

See the "2012 Service Pack 2 Fixes (May 2, 2013)

PCD-8862-Fixed an application crash in PC-DMIS related to fonts.

- Fixed a problem where a part program with large amounts of points (10,000 plus) resulted in an application crash.
- Fixed an application crash in PC-DMIS related to external commands.
- Fixed a problem where PC-DMIS would not install on a Windows 7 system if the .NET 4.5 Framework was previously installed.

#### 2012 Service Pack 1 Fixes (August 21, 2012)

- Fixed a problem where measurement values perfectly matched nominal values when measured values were snapped to the theoretical vector (with SNAP=YES).

Enhancements - 2012 Major Release Updates (May 1, 2012)" topic below for a listing of all enhancements.

## 6. Release Notes

Version 2012 of PC-DMIS is a significant development release of the software.

**Major Release Date: May 1, 2012**

**Service Pack 1 Release Date: August 21, 2012**

**Service Pack 2 Release Date: May 2, 2013**

\*\*\*\* Prior to the release of PC-DMIS 2012, Version 2011 MR1 was last official release of PC-DMIS by Wilcox Associates, Inc. and the Brown & Sharpe Metrology Group of Hexagon Metrology.

### 2012 Service Pack 2 Fixes (May 2, 2013)

- Fixed an application crash in PC-DMIS related to fonts.
- Fixed a problem where a part program with large amounts of points (10,000 plus) resulted in an application crash.
- Fixed an application crash in PC-DMIS related to external commands.
- Fixed a problem where PC-DMIS would not install on a Windows 7 system if the .NET 4.5 Framework was previously installed.

### 2012 Service Pack 1 Fixes (August 21, 2012)

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### Enhancements - 2012 Major Release Updates (May 1, 2012)

Log onto [www.pcdmis.com](http://www.pcdmis.com) for detailed information and video tutorials regarding these enhancements.

#### Auto Feature

- Implemented Contour Point BA
- In an Extended Edge point, the snap to the coordinate that the user typed in now respects the direction of the clicked CAD edge
- In an Extended Edge point, the behavior has changed so that the **Safe Distance** combo box only updates on the lost focus event
- Redefined basic items in the **Auto Feature** dialog to give a simpler look
- Made the **Snap** list in the Auto Feature dialog's **Measured Properties** area available for the Auto Circle dialog to provide the ability to sample around a hole and have the measured data projected back down to the nominal plane created by the point and vector.
- In an Extended Edge Point, the VW counter now supports 4 digits
- Opening an **Auto Feature** dialog box in basic mode now shows the Probe Toolbox attached if the probe toolbox was previously open

#### Automation

- Added a CommentInputDialog object with OnCommentInputDialogOpen() and OnCommentInputDialogClose() events

- Error Message dialogs in Universal Jog Box (UJB) can now be handled through automation a new PCDMessageBox object and HasShutDownButton property and PressShutDownButton method

## CAD

- Upgraded to DataKit V6.8 libraries
- Implemented Planner's CAD change manager in PC-DMIS
- Added the ability to remember the current translation of an assembly component, allowing you to replace the assembly component with a new, updated CAD file without having to reposition it to the desired location
- Plane features are now exported in IGES the way they appear in the graphics window so that a triangle representation of a plane is exported as a triangle bounded plane and an outline representation is exported as a convex polygon
- PC-DMIS now allows negative depth for flanged feature types (flanged hole, flanged round slot, and flanged square slot) in Chrysler DataLog file when using the Datalog import translator
- PC-DMIS DCI now supports CATIA v5 R21
- For the Optiv FDC, added focus motion calibration support and latching

## ClearanceCube

- Added the ability to create a ClearanceCube around the part to provide an alternate way of moving a probe around a part
- Added collision detection to ClearanceCube motion for articulating head
- Created a **ClearanceCube** toolbar for the ClearanceCube functionality

## Change Manager

- Made **CAD Change Manager** dialog resizable and gave them minimum sizes
- Implemented Planner's CAD change manager in PC-DMIS

## CMS -- CMM

- Created a new ATL COM Interface for exporting the sensor qualification module to a client application
- Created documentation for the new ATL COM interface to CMS sensor
- Implemented automatic self-centering of the tool sphere in the during qualification when the sphere has been moved
- Upgraded CMSkit libraries to version 3.0
- Improved precision and repeatability in the qualification algorithm by calculating sensor qualification based on continuous scan data

## CNC

- Modified label numbers, feature id handling, and probing distance parameters to work with older controllers
- Implemented a method that incorporates external work offsets with rotary tables

## Configuration

- Added Optiv Machine Model 442
- Added OptivScan Model 663
- Added a x64 bit configuration for PC-DMIS

### Constructions

- Feature lists are now sort-able making it easier to find the desired feature in a long list

### Dimensions

- Added a ClearExecutionListPriorToProgramExecution registry setting for the **File | Reset Execution List** option to speed up part program start up time

### Direct CAD Interfaces

- DCI support added for PTC Creo 1.0
- Added DCI support for SolidWorks 2012 parts

### DMIS

- Added DMIS support for new Torus feature
- Added Edge Point support to DMIS v4 and above
- Added the LegacyDMISExportNonZeroTolerance registry entry so that posting out a zero tolerance in legacy DMIS actually outputs as a small non-zero value so that CogniTens system can accept dimensions with a zero tolerance
- To support the export of legacy DMIS to the CogniTens software, part programs exported out in legacy DMIS .0001 tolerances are adjusted to .001

### Fixturing

- Added the possibility to choose whether or not to use CAD coordinates in Center calculation

### GD&T

- Modified the GD&T standard to be a Dtype so it can now be set by Automation

### Graphics

- Graphic View toolbar buttons have changed to not do a scale to fit; instead they maintain the center point on the screen and do a fluid rotation animation to new view orientation
- Added the ability to display surface boundaries with shaded surface
- Added the ability to rotate GD&T labels so they're normal to the graphic view
- Implemented a way to specify a list of surfaces that will be used to limit the box selection of features, so only the surfaces in the list will be looked at when finding features

### IGES

- Added support to the Name Property element so that IGES elements can now have labels longer than 8 characters

### Inspection Planner

- Provided a new registry entry, SkipOptimize, that controls whether or not Optimize Path will be skipped when the Change Manager runs
- Added the ability to specify the "GD&T Standard" to the IPD file

### Hasp

- Added new portlock options for GD&T Selection and Toolkit

## Install

- Added 3509, 3510, 3511 & 3512 GM probe components to Installer
- Added UG, CATIA V5, and Solidworks hex block models to the PC-DMIS install
- Updated the installer to include later RDS version, v3.2

## I++ Server

- Implemented support for CMS trigger point feedback

## Interface

- Allowed for customized max/min and default last parameters for HIS Laser probe
- Added machine type for Serein SVM2020 DCC
- Implemented the **Leica Reset** dialog
- Added support for Laser Probes in the FDC interface
- Allowed query to ZeissCMM for all options in driver\_query\_capabilities
- Added 'Cone' boundary support to linear scan
- Developed FDC interface
- Made Search distance for scans the same value as the PRG
- Removed unneeded portlock checks from Metronics HSI
- MEI: Added the ability to preheat halogen lamps
- Added support for the LSP-X1H probe to FDC interface
- Made the probe automatically appear correctly in a Zeiss interface so it can be used without having to edit it
- Made FDC interface support variable slot positioning for tool changes handled by the firmware

## License

- Added CLM utilities to PC-DMIS install
- Rebranded CLM tools to use Hexagon Metrology

## Miscellaneous

- Made it so when you save back to a previous version it always saves to the release version

## Multiple Arm

- Allowed a runtime stripe to draw during scan and Auto Feature measurement with laser (CMS - Contour) on Arm2

## NC

- Constrained the path generated for Lathes to be all at  $Y = 0$  (no C axis Rotation)
- Allowed the Vector Point option to use Surface Sample Points normally enabled on a CMM

## Non-Contact

- Exposed functions supporting the sensor qualification positioning to other applications
- Improved NCSensorModel debug file to include needed info (SetQualSphereInfo, SetTheoWristTransform, and so on)



## Path Optimization

- Added a **Minimum conical angle** option so that a hit is not taken directly coincidental to the probe body thereby helping to reduce stress on probe bodies

## Point Cloud

- Improved **Pointcloud Point Information** dialog behavior and layout
- Added the ability to limit how much of a part a given section cut uses
- Added the ability to automatically define the clipping regions around features when defining a laser plane

## Portable

- Added the ability to take a picture with the camera in the new 6 axis Absolute arm from within the **Comment** dialog
- Added compensation properties to the Quick Start functionality for 401 and 901 devices, similar to what we already do for TDRA
- Improved the Summary Text to show measured value and multiple reference features
- Added Probe Comp On/Off button to the **Portable** toolbar for Arms
- Added the ability to do a Pointcloud Best Fit alignment with an offset
- Implemented the ability to not use features defined in the Best Fit alignment as part of the computation

## Portable (Hotswap)

- Created a PC-DMIS Configurator to define different configurations of available and supported machine types and interfaces that can be switched between on the fly
- Added ability to load interfaces automatically so you no longer have to manually copy interfac.dll
- Added a **Configurations** list to **Settings** toolbar to switch between defined configurations
- Added a **Connect** and **Disconnect** buttons to the **Settings** toolbar to switch between offline or online modes if both modes are supported in the portlock
- Updated the **Connect** and **Disconnect** buttons based on the **Configuration** list and on current connection state
- Removed the requirement to use the /portable or /laser command line switches now that the Configurations list on the Settings toolbar is used instead

## Quick Start

- Added the ability to repeat the reference plane creation sequence before measuring each feature in the **Quick Start** dialog
- Improved the **Single Click Select** measurement functionality in the **Quick Start** dialog

## Reporting

- Added a **Print Black and White** setting into the **Report Print Options** dialog
- Added the ability to select multiple report templates to the **Template Selection** dialog by holding the SHIFT or CTRL keys and selecting the templates
- Added registry settings to export outgoing data to an xml file when STATS/ON command sends data to DataPage+
- Added a Remove Object Modifications shortcut menu to remove the pan/zoom/rotate modifications made to a CADReportObject

- Added a PlaneView property to the AnalysisWindowObject to allow a 3D (ISO) view of cylinders
- Added a "T" string to be passed to COMMANDDATA expression to get the T value of a feature
- Improved custom report so that Labels are mirrored when a part program is mirrored

### Summary Mode

- Improved Summary Mode's summary line of text so that it contains additional information like measured value and diameters

### Toolkit

- Added Toolkit enhancement for Find Part interface
- Migrated valve seat dimensions to become internal dimensions
- Added Probe stiffness calculations
- Added PassThruToController command to FDC
- Added BasePCDMISScanStrategy
- Toolkit features and strategies have been enhanced to take their default values from the feature or strategy of the same type
- Added ability in Toolkit command to switch temporarily from DCC to Manual and back
- Made changes to allow for separate calculations for lines/circles in Line Adaptive Scan
- Allowed MessageBoxes in Custom Commands to be controlled from jogbox Done button - OK YES and NO (same as PCDMessageBox in PCDMIS)
- Added the ability to interrupt (skip) a custom Toolkit command programmatically
- Created an Adaptive Cone scan strategy
- Added ability to Adaptive Scan: Circle, Line, Cylinders with circles, Cones with circles, and Planes with circles
- Formatted Dimensions in XML templates
- Changed Probe Stiffness calculation to be an average of all three axes
- Added ability to update path lines in the Graphics Display window if a property value changes in VWMP-CA for these properties: Actl Thickness, Safe Distance, Long spacer, Short spacer, Long depth, Short depth, or Start angle
- For VWMP features, added the ability to display the comment for a skipped Toolkit command in the report
- Added a check for the Blade Measurement command to ensure that the attached portlock is programmed with PC-DMIS Blade
- Added automatic menu registration capability to Toolkit Commands so users don't automatically have to insert items into menus

### User Interface

- Updated scrolling credits
- Moved the **OpenGL** menu item in the **Edit | Graphics Display Window** menu
- Sorted the menu items in the Edit window's context menu
- Added toolbar icon to display boundaries with shaded surfaces
- Updated **Collisions** dialog changing **Cancel** button to **Close**
- Expanded the **Schema** drop down list in the **Save As** dialog so you can now read the whole contents of the list box
- Updated (C) to 2012 for 2012 version
- Made **New Part Program** dialog more aesthetically pleasing

- Made common dialogs and the **About** dialog more aesthetically pleasing
- Modified the PCD2Excel wizard to include an option to output zeroes instead of empty strings when a field is blank

### Vision

- For the Optiv FDC, added focus motion calibration support and latching
- The **Continue** button on the Execution dialog is now disabled whenever PC-DMIS performs a focus
- For the Optiv FDC, added support for TESTPOS common controller command

### Vision (PVG)

- Added an Auto Void button to calculate spaces in a feature (such as a key slot in a hole).
- Added ability to move Overlays with the mouse even when locked to part
- Hid Greyscale button if a color camera is not being used
- Added a **Use part coordinates** check box that when marked displays the position of the overlays
- Added a SensiFocus option to the right-click menu to focus with ROI centered on the clicked position
- Moved the **Auto Freeze Frame** button from **Live Image View** toolbar onto the **Live Image View Setup** dialog
- Hid the **Laser** option on **Live Image View** toolbar when no laser is available
- Changed the amount of machine motion required before the UI updates.
- Hid all buttons other than DCC/Manual from the Probe Mode toolbar if vision probe is active
- Expanded the feature coverage to have a number of zone as well as a percentage
- Made it so magnification is changed at the time of execution to be within the required magnification range
- Created an image processing algorithm to detect and generate box-selected features in the FOV

## 7. Contact Hexagon Metrology

For further information regarding this release of PC-DMIS® 2012, please feel free to contact [sales@wilcoxassoc.com](mailto:sales@wilcoxassoc.com) or visit [www.pcdmis.com](http://www.pcdmis.com).

Hexagon Metrology Technical Support can be reached by calling (800) 343-7933.