



Analyze 8.1 Windows Installation Instructions

Windows

Welcome to Analyze 8.1, a robust, powerful, and practical research software for advanced biomedical imaging visualization, manipulation, and measurement. Analyze features integrated, complementary tools for fully interactive multi-dimensional display, processing, segmentation, registration, and measurement of biomedical imaging modalities including MRI, CT, PET, SPECT, ultrasound, and digital microscopy. It has been designed and carefully programmed to be highly efficient and user-interactive, performing powerful 3-D image processing and display operations in seconds. The applications of Analyze are broad in scope, wide in scale, and penetrating in impact.

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I. Installing Analyze 8.1 on Windows Systems:

System Requirements

Analyze 8.1 requires the following minimum PC configuration:

- Windows 2000, XP, XPx64, or Vista
- Intel Pentium or compatible processor
- Network card
- CD-ROM drive
- 512 Mb RAM*
- 24/32-Bit graphics capability
- At least 450 Mb disk space

*Analyze requires RAM amounts equal to double the size of the data set to be processed.

Uninstalling Previous Versions of Analyze

Before installing Analyze 8.1, it is recommended to uninstall any previous Analyze versions resident on your system. Otherwise, make sure to choose a new directory for Analyze 8.1 during installation. To uninstall previous versions of Analyze:

1. Navigate to the **Control Panel (Start > Settings > Control Panel)** and select **Add or Remove Programs**.
2. In the window returned, click **Change or Remove Programs**.
3. Select the previous version of Analyze and click **Remove**. A dialog box will be returned requesting confirmation, click **Yes**. The previous version of Analyze will be removed from your system.
4. Navigate to the **C: drive** and delete the **C:\BIR** folder.

Analyze 8.1 Installation

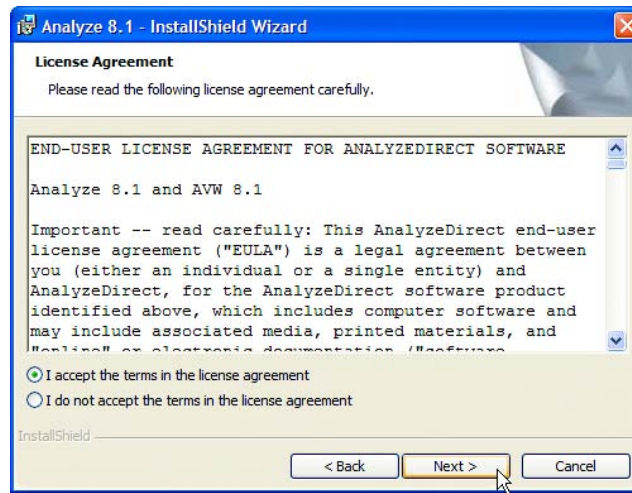
The InstallShield Wizard program will lead you through the complete installation of Analyze 8.1 (including optional components that are not installed in a typical installation). To begin the installation process:

1. Start Windows on your system.
2. Close all active programs on the desktop.
3. Insert the **Analyze 8.1 Installation CD** into your PC.
4. The **InstallShield Wizard for Analyze 8.1** should automatically open.
5. If the InstallShield Wizard does not open, select **Start > Run**, and in the Open box enter the location of your CD-ROM drive followed by **\setup.exe** (e.g. D:\setup.exe, where 'D' equals your CD-ROM drive). Then, click **OK**.
6. Once the **InstallShield Wizard** for **Analyze 8.1** is open, click **Next**.

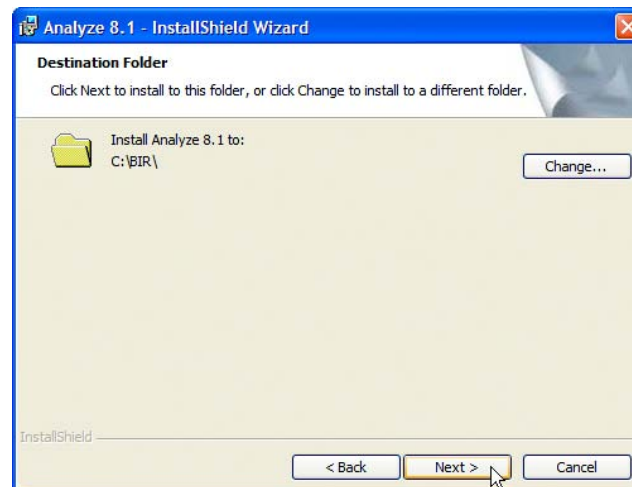
I. Installing Analyze 8.1 on Windows Systems:



7. **License Agreement:** Please read the agreement and then select '**I accept**' or '**I do not accept**' option. If you select '**I do not accept**' Analyze will not install. Click **Next**.



8. **Destination Folder:** The default location for installation is **C:\BIR** (assuming Windows is installed on the C: drive), it is recommended to leave this as the destination folder (BIR stands for Biomedical Imaging Resource, the organization at Mayo Clinic that develops Analyze). Click **Next**.

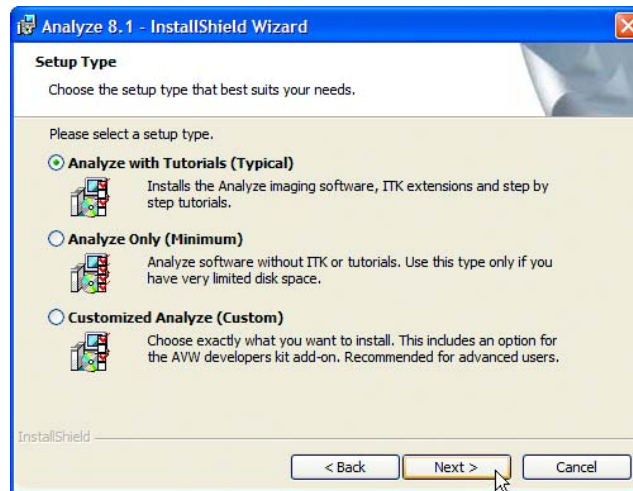


I. Installing Analyze 8.1 on Windows Systems:

9. **Setup Type:** You may choose from three different installation types:

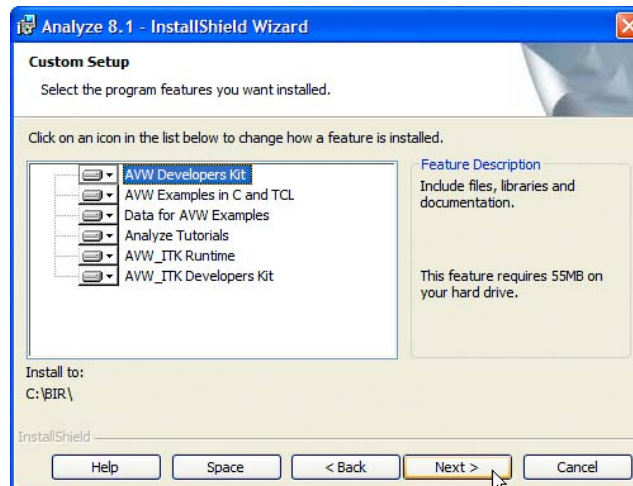
- **Analyze with Tutorials** (Typical): Installs Analyze 8.1 Runtime software files, the Analyze Tutorials, and the ITK Runtime software files (Analyze can be extended with functions from the ITK Library; functionality includes Filtering, Segmentation, and Registration) (140 Mb)
- **Analyze Only** (Minimum): Installs only Analyze 8.1 Runtime software files (110 Mb)
- **Customized Analyze** (Custom): Installs the Analyze 8.1 Runtime software files and permits selection of six optional components

AVW Developers Kit (55 Mb)
AVW Examples in C and TCL (1212 Kb)
Data for AVW Examples (16 Mb)
Analyze Tutorials (41 Mb)
ITK Runtime software files (4024 Kb)
ITK Developers Kit (904 Kb)



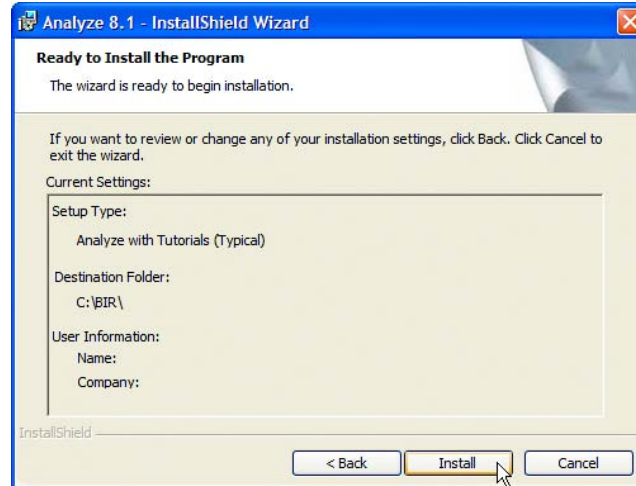
10. It is recommended for most users to choose the **Analyze with Tutorials** (Typical) installation.

11. However, if you plan to use the **Analyze Developers Add-On**, choose **Custom** installation. Deselect any components you wish NOT to install and click **Next**.

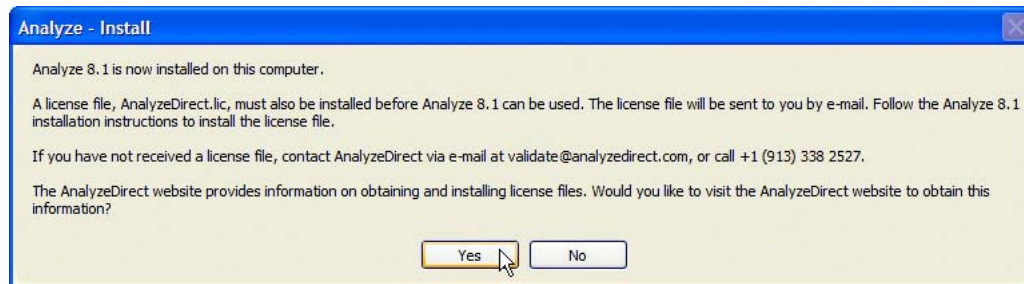


I. Installing Analyze 8.1 on Windows Systems:

12. After selecting your installation type, click **Next**.
13. **Ready to Install the Program:** If the 'Current Settings' are accurate, click **Install**.



14. **Analyze 8.1** will now be installed by default to the Program folder: **Mayo Clinic Analyze (Start > All Programs > Mayo Clinic Analyze)**.
15. Once installation is complete, click **Finish**. A dialog box will automatically be returned with information on **AnalyzeDirect.lic** license file. For instructions on how to obtain and install your license file, click **Yes** to be directed to www.analyzedirect.com. These instructions can also be found in the proceeding section, "**Analyze License Files**".



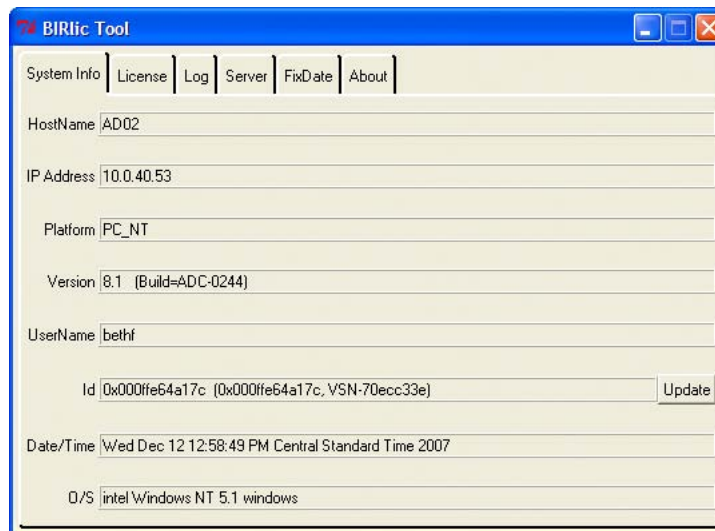
II. Analyze License Files:

Obtaining a License File

Analyze 8.1 requires a system-specific license file to run, you can obtain this license file from **AnalyzeDirect**.

In order to generate your license file, **AnalyzeDirect** needs to receive two pieces of information specific to your PC: 1) the **System Name** and 2) **System ID**. Please follow the steps below to obtain this information.

1. Select **Start > All Programs > Mayo Clinic Analyze > BIRlic Tool**.
2. The **BIRlic Tool** will open to the **System Info** tab.



3. Please take a screenshot* of the **System Info** tab and send it to validate@analyzedirect.com, along with your **name**, **company**, and **telephone number**. If you are unable to take a screenshot, please provide the information reported in the **HostName** and **ID** fields in your e-mail.

** To take a screenshot press <Alt + Print Screen> on your keyboard. A screenshot of the current active window will be saved to memory. Paste the screenshot into your e-mail or into a word document and attach it to your e-mail (choose Edit > Paste, or press <Control + v>).*

4. Once **AnalyzeDirect** receives your system information, a license file will be generated and sent to you via e-mail. To install your license file, follow the instructions in "**Installing a Node-Locked License File**" or "**Installing a Floating License File**", depending on your license type.

BIRlic License Management and the AnalyzeDirect.lic License File

Analyze 8.1 uses the **BIRlic** license management software for **Analyze** validation and runtime license administration. The **BIRlic** software is located in the **C:\BIR\BIRlic-8.1** directory, and contains a subdirectory called **Licenses** in which your license file is stored; you will find that a default **AnalyzeDirect.lic** license file is provided with installation.

The default AnalyzeDirect.lic license file MUST BE REPLACED by an AnalyzeDirect.lic file specific to your system, otherwise Analyze 8.1 will not open!

II. Analyze License Files:

Two different types of Analyze licenses are available for purchase – node-locked and floating. A node-locked license allows Analyze to be run on one workstation only, while a floating license allows a workstation to act as a license server, “floating” the license to any number of client systems. Any client system with access to the license server can check out a license from the server if one is available. Note, if only one floating license is purchased, two or more clients cannot run Analyze simultaneously.

Note: Dongles can be purchased as an add-on to a node-locked license (Windows systems only).

For information on license pricing please contact sales@analyzedirect.com.

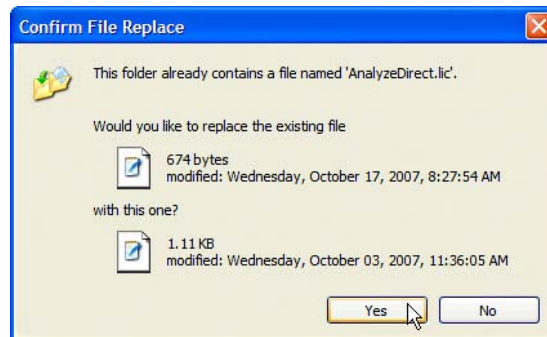
Installing a Node-Locked License

Note: Analyze evaluators will receive a node-locked license.

A node-locked license file contains only the relevant validation information for one specific system on which Analyze 8.1 will run. In this case, license administration is handled entirely local to the specific system, with license file access automatically invoked when Analyze 8.1 is opened.

To install a dongle-based license please refer to page 14, “Dongle Installation Instructions”.

1. Locate the **AnalyzeDirect.lic** license file (sent to you via e-mail).
2. Save the **AnalyzeDirect.lic** license file to the **C:\BIR\BIRlic-8.1\Licenses** directory. A dialog box will be returned stating that the file 'AnalyzeDirect.lic' already exists, click **Yes** to replace it.



Troubleshooting Tip: If you are not asked to replace the current AnalyzeDirect.lic file, navigate to the licenses directory (C:\BIR\BIRlic-8.1\Licenses) and check that the license file is named AnalyzeDirect.lic. If you see a file with a different extension, your e-mail editor may have changed the license file name. Please contact support@analyzedirect.com for help in correcting this.

3. For instructions on how to run **Analyze 8.1**, please refer to “**Running Analyze 8.1**” on page 11.

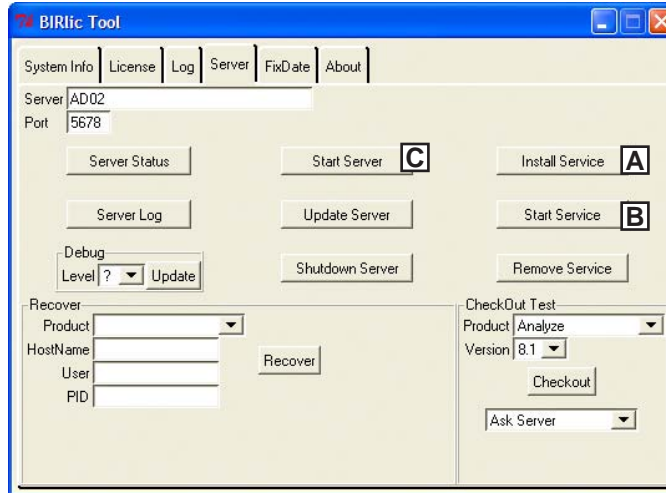
Installing a Floating License

A floating license is a license file generated to allow a workstation to act as a license server, “floating” access to Analyze over the local area network to multiple client systems. To install a floating license file, first make sure Analyze 8.1 is installed on the system that will act as the floating license server. Then do the following:

1. Locate the **AnalyzeDirect.lic** license file (sent to you via e-mail).
2. Save the **AnalyzeDirect.lic** license file to the **C:\BIR\BIRlic-8.1\Licenses** directory. A dialog box will be returned stating that the file AnalyzeDirect.lic already exists, click **Yes** to replace it.

II. Analyze License Files:

3. A floating license requires the BIRlic license server service to be installed and started on the system acting as the license server. Open the **BIRlic Tool (Start > All Programs > Mayo Clinic Analyze > BIRlic Tool)**.
4. Select the **Server** tab.



5. Click **Install Service [A]**. A dialog box will be returned stating that this option installs BIRlic Server as a Service on this computer, click **Yes** to continue.
6. A confirmation window will automatically be returned when the service is installed on the computer, click **OK** to dismiss the window.
7. To start the license server service, click **Start Service [B]**. A dialog box will be returned stating that this option starts the BIRlic Server as a Service on this computer, click **Yes** to continue.

Note: The Service will automatically start whenever this system is rebooted/restarted.

8. A confirmation window will automatically be returned when the service is started on the computer, click **OK** to dismiss the window.
9. To start the server process, click **Start Server [C]**. A dialog box will be returned asking if you would like to start a local License Server on this system, click **Yes** to continue.
10. A confirmation window will be returned stating that the Start command has been issued, click **OK** to dismiss the window. Analyze can now be run on the server system.

Configuring Client Systems to Access a Floating license:

11. Install **Analyze 8.1** on any client systems that will access the floating license.
12. Save the **AnalyzeDirect.lic** license file (the same license file installed on the server system, sent to you via e-mail) to the **C:\BIR\BIRlic-8.1\Licenses** directory of each client system. Again, you will be asked if you wish to replace the existing AnalyzeDirect.lic license file, click **Yes** to replace it.
13. **No additional configuration is required on the client machines.** You should **NOT** start a license server process on the client systems. For instructions on how to run Analyze 8.1, please refer to "**Running Analyze 8.1**" on page 11.

II. Analyze License Files:

License File Expiration and Renewal

All Analyze license files have a built-in expiration date. For Analyze evaluators, this date is 30 days after the license file was first sent. If you are an evaluator and you still wish to use Analyze following the expiration of your license file, please contact us at sales@analyzedirect.com to find out about purchasing options.

For Analyze customers, long-term Analyze license files are provided in 12-month increments. This provides the opportunity for you to change the system running Analyze, if required.

AnalyzeDirect contacts all customers one month prior to the expiration of the license file to determine if the license file system information is still current. Once we receive system confirmation, a new license file will be sent by e-mail. If your license file expires, and you have not yet received a new license file, please contact us at validate@analyzedirect.com to obtain your renewal license file.

Installing a Renewal Node-Locked License

1. Locate the new **AnalyzeDirect.lic** license file (sent to you via e-mail).
2. Save the **AnalyzeDirect.lic** file to the **C:\BIR\BIRlic-8.1\Licenses** directory. A dialog box will be returned stating that the file 'AnalyzeDirect.lic' already exists, click **Yes** to replace it.
3. Analyze should now be ready to use.

Installing a Renewal Floating License

1. Locate the new **AnalyzeDirect.lic** license file (sent to you via e-mail).
2. On the server system, save the new **AnalyzeDirect.lic** file to the **C:\BIR\BIRlic-8.1\Licenses** directory. A dialog box will be returned stating that the file 'AnalyzeDirect.lic' already exists, click **Yes** to replace it.
3. Open the **BIRlic Tool (Start > All Programs > Mayo Clinic Analyze > BIRlic Tool)**.
4. Select the **Server** tab. First, click **Shutdown Server** then restart by clicking **Start Server**.
5. On all of the client systems save the new **AnalyzeDirect.lic** file to the **C:\BIR\BIRlic-8.1\Licenses** directory. A dialog box will be returned stating that the file 'AnalyzeDirect.lic' already exists, click **Yes** to replace it.
6. **No additional configuration is required on the client systems.** Analyze should now be ready to use on both the server and client systems.

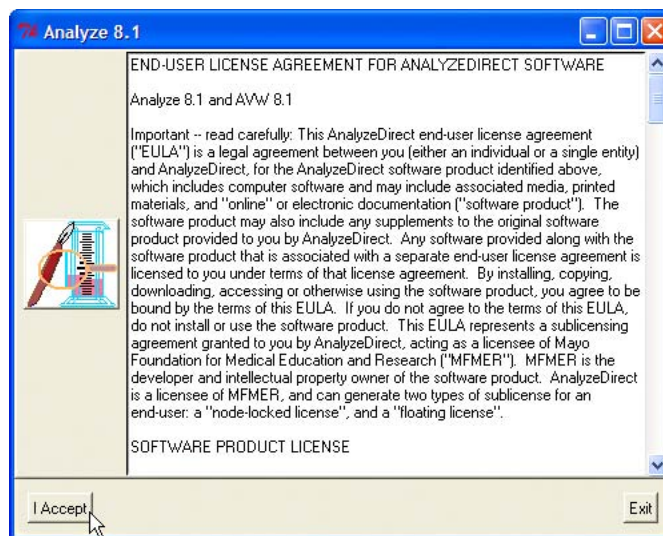
III. Running Analyze 8.1:

Running the Analyze Program

Once you have installed **Analyze 8.1** and your system specific license file, you are ready to run the program.

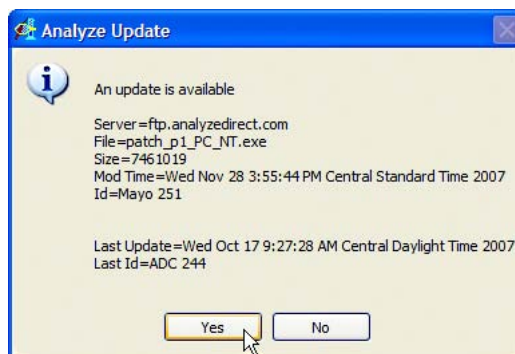
1. Select **Start > All Programs > Mayo Clinic Analyze > Analyze 8.1** or click the **Analyze 8.1** desktop shortcut.
2. The first time **Analyze 8.1** is opened the End-User License Agreement for AnalyzeDirect Software will be displayed. Please read the agreement and then click **I Accept** or Exit. Note, if you click Exit Analyze will not run.

Note: If Analyze fails to open, please contact support@analyzedirect.com.



Analyze Patch Updates

As with most software products, the process of bug fixing and minor maintenance between versions is an ongoing process. Analyze has all such fixes available in the form of a patch. Patches can be automatically downloaded and installed by selecting the **Help > Analyze Update** option from the main Analyze window. It is recommended to check periodically for updates.



IV. Analyze 8.1 Basics:

Analyze 8.1 Resources

There are several excellent resources available to help you get started with **Analyze 8.1**.

To quickly learn the basics of Analyze, we recommend that you work through the **Analyze 8.1 Quick Start Guide**—found on the **Resources CD** included with your installation disk. The Quick Start Guide contains a series of short exercises covering the most commonly used Analyze features and functions. Please refer to the “**Installing Tutorial Data**” section in the Quick Start Guide to install the tutorial data used in the exercises.

The **Analyze Tutorials** (optional component during installation) and the **Analyze User’s Guide**, both available from the **Help menu** in the main Analyze window, are another excellent resource, providing detailed information about the Analyze modules.

Note: The Quick Start Guide, Analyze Tutorials, and Analyze User’s Guide are all in PDF format and require Adobe Acrobat Reader. To install the latest version of Acrobat Reader please visit www.adobe.com/acrobat.

Analyze Viewlets (short tutorial movies) are also now available and can be accessed by selecting the Analyze Viewlets option from the **Help menu**. The viewlets show many of the key features and functionality of the Analyze modules and can help you become familiar with the program interface.

Analyze Image File Format Support

Of special note - Analyze does not automatically load all of the image file format support libraries that are possible with Analyze. This keeps module startup time to a minimum, loading only those image formats that you need to use with Analyze for your purposes. To configure your version of Analyze to load additional image file formats, use the Import/Export External Libraries tool; instructions on configuration can be found in the Quick Start Guide, Exercise 3: Switching on Support for Additional Formats.

AnalyzeDirect Technical Support

For support related issues, please send an e-mail to the AnalyzeDirect support team at support@analyzedirect.com. Maintenance Agreements, which include access to unlimited priority technical support and free version upgrades, can be purchased by contacting us at +1.913.338.2527 or via e-mail at sales@analyzedirect.com.

V. Analyze Developers Add-On:

The **Analyze Developers Add-On** allows software developers to extend the capabilities of Analyze by developing their own macros and modules, using the **AVW** (A Visualization Workshop) image function library on which Analyze is built, and **Tcl/Tk**, the interface language used by Analyze.

To get access to development capabilities, enter 'y' when asked if you would like to install the **AVW Development Files** during **installation**. The Developers Add-On also requires an **AnalyzeDirect.lic** license file that allows access to these development capabilities. By default, the license file ordering process outlined in "Obtaining a License File", sends a license file that does not give development access – please indicate that you need a **Developers Add-On license file** when you send your e-mail to validate@analyzedirect.com.

The Developers Add-On assumes you are familiar with programming in the C and Tcl programming environment. If you want to know more about Tcl programming, we recommend starting with the 'Bible' of Tcl/Tk - "**Practical Programming in Tcl and Tk**" by Brent Welch. This comes with a CD that you can load on to your computer, which includes a full Tcl/Tk implementation and many examples.

The **AVW Programmers Guide**, **AVW Reference Manual**, and **AVW Quick Reference Guide** can be found in the **C:\BIR\AVW-8.1\Manuals** directory, or can be downloaded in PDF format from our website at www.analyzedirect.com/support/downloads.asp.

The best place to start practicing AVW-based Tcl/Tk is in the examples provided in the **C:\BIR\AVW-8.1\Extras** directory. Here you will find a number of example source files, both in C and in Tcl/Tk, for common Analyze imaging tasks (like rendering, segmentation, etc.). The .tcl scripts contained in these subdirectories are full source code scripts that can be run, but you do need the Tcl/Tk environment set up such that these scripts can find the Tcl/Tk files needed to execute. The **develop_env.bat** script included in the **C:\BIR\AVW-8.1** directory should be used to set the development environment variables. The **develop_env.bat** file is for Windows NT systems only. You should use the **develop_env.bat** file to make sure everything is set up before running any of the Tcl/Tk scripts.

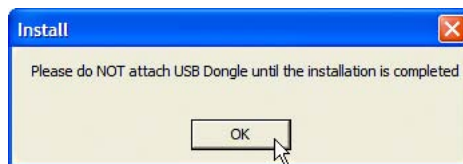
VI. Dongle Installation Instructions

The following instructions are for the installation of **drivers** and the **AnalyzeDirect.lic** license file for use with a **dongle**.

Note: Dongles are only available for Windows systems. There is no current support for 64-bit systems.

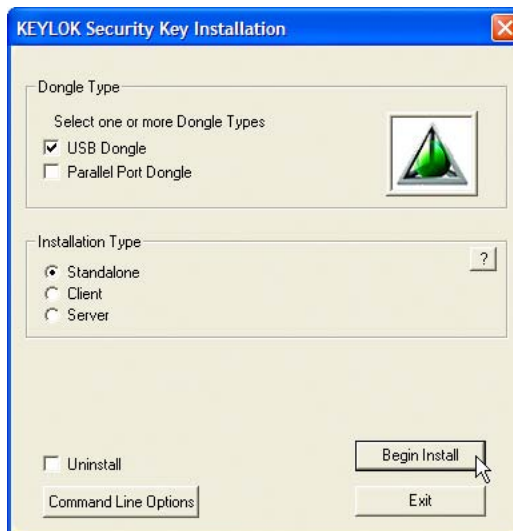
Please **DO NOT** attach the dongle to the system until directed to do so in the instructions below.

1. Install **Analyze 8.1** according the instructions found on page four. The dongle installation instructions below assume Analyze has been installed to the default location, **C:\BIR**.
2. The dongle drivers need to be installed **BEFORE** plugging the dongle into your system. The dongle driver installation program is shipped with Analyze and can be found in the following directory: **C:\BIR\BIRlic-8.1\PC_NT\USB_Dongle**. Double-click on the **Install.exe** icon to start the dongle driver installation.
3. In the Security Key Installation window returned check the **USB Dongle** option. A dialog box will be returned specifying that you should not attach the dongle until the installation is complete. Click **OK** to dismiss this window.



Note: If you have attached the dongle, please remove it from your system. In the Security Key Installation window select the Uninstall option and then click OK. Follow these installation instructions from step 1.

4. Select **Standalone** (if not already selected) and then click **Begin Install**. A dialog box will be returned stating that this utility will copy the required device driver files to your system, click **OK**. The installation process will now run.



5. Once the installation process is complete, a notification will be returned, click **Close** to dismiss the window.

VI. Dongle Installation Instructions

6. Locate the **AnalyzeDirect.lic** license file for your dongle (sent to you via e-mail). If you do not have this, please contact AnalyzeDirect at validate@analyzedirect.com and indicate that you are ready for your dongle license file.
7. Copy the **AnalyzeDirect.lic** license file to the **C:\BIR\BIRlic-8.1\Licenses** directory, replacing any existing AnalyzeDirect.lic file.
8. Attach the dongle to a USB port on your system.
9. The **Add Hardware Wizard** will automatically open. Follow the instructions in the Wizard to correctly install the driver.
10. Once the Add Hardware Wizard is complete, Analyze will open as long as the dongle is attached to the computer.
11. This installation procedure can be repeated for every computer on which you plan to use the dongle-based license.

If you have questions or difficulties, please contact AnalyzeDirect at support@analyzedirect.com. We will be happy to assist you.