Leica Geosystems

ERDAS IMAGINE®
Configuration Guide for Windows

GIS & Mapping, LLC
Atlanta, Georgia

Leica Geosystems

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Table of Contents

Preface

About this Manual

The ERDAS IMAGINE® *Configuration Guide* provides step-by-step instructions for installing ERDAS IMAGINE software, licenses, and configuring peripherals. Sections regarding viewer preferences and adding fonts to annotation are also included for your reference.

The sections about configuring peripherals tell you how to set up a tape drive and/or a tablet digitizer so that each can be accessed by ERDAS IMAGINE software. The sections are not intended to provide every detail about installing and configuring an input or output device. You should still refer to the manufacturer's documentation for each device.

Documentation

This manual is part of a suite of on-line documentation that you receive with ERDAS IMAGINE software. There are two basic types of documents, digital hardcopy documents which are delivered as PDF files suitable for printing or on-line viewing, and On-Line Help Documentation, delivered as HTML files.

Digital Hardcopy Documentation

The ERDAS IMAGINE Digital Hardcopy Documentation is designed to provide comprehensive information about a particular concept or to walk you through complicated steps in a process like the Installation of IMAGINE or Advanced Classification. The Digital Hardcopy Documentation also contains programming reference material, such as the ERDAS Macro Language Reference Manual which helps you design your own IMAGINE dialogs. These documents may be found in the <IMAGINE_HOME>/help/hardcopy folder or by selecting **Start | Programs | Leica Geosystem GIS & Mapping | ERDAS IMAGINE 8.7 | Online Manuals**.

To read the IMAGINE PDF Documentation, you must install Adobe Acrobat Reader 4.0 or higher and follow all installation instructions provided by the software, especially those regarding internet browser and Acrobat integration.

Following is a list of PDF documentation that is available with ERDAS IMAGINE software:

- *ERDAS Field Guide*™ (FieldGuide.pdf)
- *ERDAS IMAGINE Configuration Guide* (ConfigGuide.pdf)
- *ERDAS IMAGINE Tour Guides*™ (TourGuide.pdf)
- ERDAS Macro Language Reference Manual (EML.pdf)
- ERDAS Spatial Modeler Language Reference Manual (SML.pdf)
- ERDAS IMAGINE Read Me First document
- ERDAS IMAGINE V8.7 Release Notes
- FLEXlm End Users Guide (enduser.pdf)
- What's New in ERDAS IMAGINE V8.7

On-Line Help Documentation

The IMAGINE On-Line Help Documentation is set up as a network of HTML files that are displayed in your default internet browser and provide quick, informative chunks of information on all of the IMAGINE dialogs, as well as additional explanatory notes and diagrams. This HTML database includes JavaScript applets that provide an expanding and collapsing Table of Contents, Index, and Full Text Search utilities. To use these applets you must have installed a compliant browser (Netscape 4.7 or Internet Explorer 5.5 or higher are greatly recommended) and that you enable Java scripting in your browser properties.

Following is a list of on-line manuals that can be found in the On-Line Help in ERDAS IMAGINE software. This list may change depending on your software package and add-on modules you have purchased:

- ERDAS IMAGINE:
  - Introduction
  - Annotation
  - AOI (Area of Interest)
  - Classification
  - DPPDB (Digital Point Positioning Database) Workstation
  - Expert Classifier
  - HyperSpectral
  - Image Catalog
  - Image Interpreter
  - IMAGINE Interface
  - Imagizer
  - Import/Export
  - Importing Native Formats
  - Map Composer
  - Mosaic Tool
  - NITF
  - Preferences
  - Radar Mapping Suite
  - Rectification
  - Session

  - Spatial Modeler
  - Spectral Analysis
  - Tools and Utilities
  - Vector
  - Viewer
  - Viewer Raster Tools
  - VirtualGIS
  - Appendices

- Leica Photogrammetry Suite

  - OrthoBASE
  - OrthoBASE Pro
  - Stereo Analyst
  - Terrain Editor
  - Viewplex
  - ImageEqualizer

Documentation Functions

The following table details the different types of information you can extract from ERDAS IMAGINE documentation.

If you want to...	Read...
Install ERDAS IMAGINE	ERDAS IMAGINE V8.7 *Release Notes* document, then Chapter 2 “Installing ERDAS IMAGINE” on page 9 of this document
Customize FLEXlm License software	FLEXlm End Users Guide (enduser.pdf)
Set up hardware for use with ERDAS IMAGINE	See Chapter 6 “Configure Tablet Digitizer” on page 55 and/or Chapter 7 “Configure Tape Drive” on page 65 of this document
Learn about new features in the latest release	What’s New in ERDAS IMAGINE V8.7
Learn to use ERDAS IMAGINE	ERDAS IMAGINE Tour Guides (TourGuide.pdf)
Learn about GIS and image processing theory	ERDAS Field Guide (FieldGuide.pdf)

Conventions Used in This Book

In ERDAS IMAGINE, the names of menus, menu options, buttons, and other components of the interface are shown in bold type. For example:

“In the Raster dialog, select the **Fit to Frame** option.”

Raster is the name of a specific dialog and **Fit to Frame** is an option within that dialog.

Terminology

When asked to use the mouse, you are directed to click, shift-click, middle-click, right-click, hold, drag, etc.

- click — designates clicking with the left mouse button

- shift-click — designates holding the Shift key down on your keyboard and simultaneously clicking with the left mouse button

- middle-click — designates clicking with the middle mouse button
- right-click — designates clicking with the right mouse button
- hold — designates holding down the left (or right, as noted) mouse button
- drag — designates dragging the mouse while holding down the left mouse button

Special Characters and Fonts

Certain characters and font styles have special meaning in ERDAS IMAGINE documentation.

<words**>**

When you see words enclosed in **< >**, substitute the proper information for these words. For example, when you see <IMAGINE_HOME> in this document, replace it with the name of the drive and directory where ERDAS IMAGINE is installed on your system.

`Prompts`

Words that appear in the above font style represent program prompts that appear on the screen.

Commands, Entries

Words that appear in the above font style are used to show commands that you need to enter, and examples of data that you may enter as a response to a program prompt. A word enclosed in brackets **[ ]** at the end of a prompt is the default answer for that prompt. Press the Return key to accept the default answer.

Special Paragraphs

The following paragraphs are used throughout the ERDAS IMAGINE documentation:

These paragraphs contain strong warnings or important tips.

These paragraphs direct you to the ERDAS IMAGINE software function that accomplishes the described task.

These paragraphs lead you to other sections of this manual or other specified manuals for additional information.

NOTE: Notes give additional instruction.

Shaded Boxes

Shaded boxes contain supplemental information that is not required to execute the steps of a tour guide, but is noteworthy. Generally, this is technical information.

Section I

Installing ERDAS IMAGINE for Windows

Chapter 1

Preparation for Installation

Introduction

This document provides updates to installation and configuration instructions for ERDAS IMAGINE V8.7 for Microsoft Windows NT 4.0, Windows 2000, and Windows XP Professional.

NOTE: This manual contains important updated information that is crucial to the successful installation and operation of your software. Please read this manual before trying to install or run ERDAS IMAGINE.

It is strongly recommended that you have full administrator privileges to install ERDAS IMAGINE on a Windows operating system.

System Requirements

As with any advanced software, greater system resources result in greater performance. The following tables detail the minimum system requirements to run ERDAS IMAGINE V8.7.

Table 1-1: Requirements - Windows 2000

System:	Intel Pentium II (or higher)
Operating System:	Windows 2000
Service Pack:	Service Pack 2 (or better)
Memory:	256 MB (512 MB highly recommended)
Hard Disk Space:	2.4 GB for full installation
Display:	Super VGA 1024 x 768 x 64K colors (or better)
Install Media:	Microsoft Windows compatible CD-ROM drive
Mouse:	Microsoft Windows compatible mouse (Microsoft Intellimouse recommended)
Parallel Port:	Centronics parallel port

Table 1-2: Requirements - Windows XP Professional

System:	Intel Pentium II (or higher)

Table 1-2: Requirements - Windows XP Professional (Continued)	
Operating System:	Windows XP Professional
Service Pack:	Service Pack 1 (or better)
Memory:	256 MB (512 MB highly recommended)
Hard Disk Space:	2.4 GB for full installation
Display:	Super VGA 1024 x 768 x 64K colors (or better)
Install Media:	Microsoft Windows compatible CD-ROM drive
Mouse:	Microsoft Windows compatible mouse (Microsoft Intellimouse recommended)
Parallel Port:	Centronics parallel port

Disk Space

Several processes in ERDAS IMAGINE create temporary files. On a system with multiple disk drives, the drive that contains the default directory (**c:\temp**) may not have enough space. Be sure to set the **Temporary File Directory** in the **User Interface and Session** category of the **Preference Editor** to a directory with sufficient disk space (the actual amount you need depends on the size of the files and applications you use with ERDAS IMAGINE).

Some temporary files may not be deleted automatically, causing the temporary directory to become overloaded. If this happens, exit ERDAS IMAGINE and delete the files in the temporary directory.

If the **Temporary File Directory** in the **Preference Editor** specifies a nondirectory file or a nonexistent directory, no error message is reported and the **c:\temp** directory is created and used for temporary files.

Refer to the "Microsoft Windows System Guide" for information on configuring spool directories.

Installation Tips

The following is a list of general tips for proper installation of IMAGINE.

- To properly install ERDAS IMAGINE on a Windows operating system, it is strongly recommended that you have full administrator privileges.
- The Administrator must create a user account for each user. This gives each user a username and password for logging into the system. A unique home directory for each user is highly recommended in order to make use of ERDAS IMAGINE's user-specific preference capabilities.
- The first time you run a new installation of ERDAS IMAGINE on a Windows operating system, you must be logged in as a user with full administrative privileges.

Refer to the “Microsoft Windows System Guide” for information on setting up user accounts.

ERDAS Software Security

This section gives you an overview of the ERDAS IMAGINE software security system.

License File

For each unique ID, there is a license file provided by Leica Geosystems. This file protects the software against unauthorized use and determines which modules you can use, the number of users, and when, or if, the modules expire. If the license file generated for a unique ID specifies multiple users, then the License Manager can be used to “float” licenses around a network.

Hardware Key

Although ERDAS IMAGINE V8.7 does not require the use of a hardware key, it can use the hardware key provided with previous installations of IMAGINE to provide a unique System ID number. The hardware key is a device that attaches to a parallel port on the computer. It is installed between the computer and any other peripheral device which may be connected to that port. It does not interfere with the normal use of the parallel port.

License Tools

In the case of a remotely licensed installation of ERDAS IMAGINE, the License Server acts as a license server by allowing multiple licenses to be “floated” from a single computer.

See Chapter 4 “Software Licensing” on page 31 for an explanation of license serving functionality.

In addition to the License Server, there are some advanced licensing tools supplied by FLEXlm.

For more information on the FLEXlm tools, see the FLEXlm End Users Guide provided in the <IMAGINE_HOME>/help/hardcopy/enduser.pdf document.

Installation

The ERDAS IMAGINE installation process may include add-on modules. Running any of these add-on modules requires purchasing a license for them.

Local Installation

A local installation copies all necessary files and configures a machine to run ERDAS IMAGINE independently. It copies executable files to disk. All of the ERDAS IMAGINE modules and components reside only on the designated machine; network access is not required.

Add-on Modules

You can also incorporate add-on modules into an existing installation of ERDAS IMAGINE software.

In some cases, the module is included in the list of module components you access during installation. For example, you can choose VirtualGIS™ from the components list. If you have selected the add-on module during installation of ERDAS IMAGINE, then you can also incorporate its license file as you do the license file for ERDAS IMAGINE.

If you did not choose the module at the time of ERDAS IMAGINE installation, you can reinsert the CD into the CD-ROM drive and begin again. This time, select only the module you wish to install. You can also enter the license file separately.

Other add-on modules to ERDAS IMAGINE may come on separate CD-ROMs. In this case, simply insert the CD-ROM into the appropriate drive, and follow the installation instructions provided with the module. You can add the new license file at the end of the installation process.

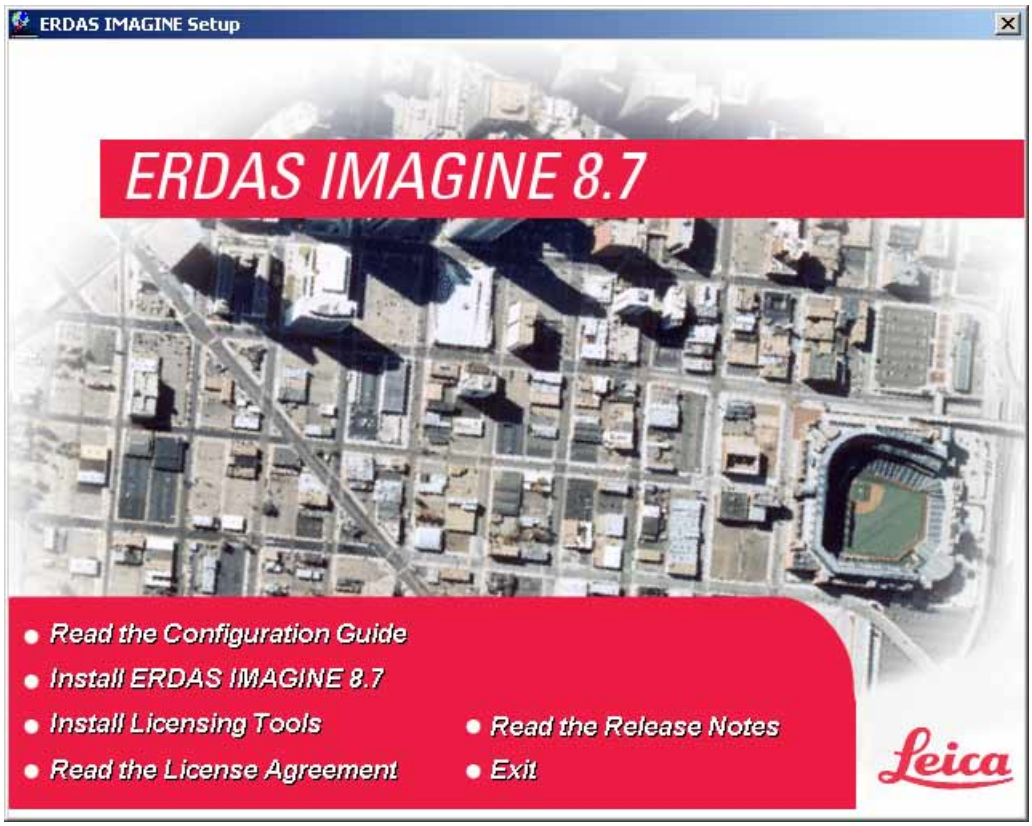
Licensing

For any installation, the licensing can be local or remote (via the License Server). The remote option requires a network connection.

See Chapter 4 "Software Licensing" on page 31 for instructions on how to use ERDAS License Server.

The ERDAS IMAGINE CD-ROM

The ERDAS IMAGINE CD-ROM master panel provides access to different components of ERDAS IMAGINE. Following is a description of what each one of the options does.



Read the Configuration Guide opens this PDF document.

Install ERDAS IMAGINE 8.7 accesses the setup dialogs to perform an installation of ERDAS IMAGINE.

Install Licensing Tools will install the necessary software for creating a licensing service on your computer.

Read the Release Notes will display the Release Notes for ERDAS IMAGINE and the add-on modules.

Read the License Agreement will display the ERDAS License document.

Exit will close this dialog.

Chapter 2

Installing ERDAS IMAGINE

Description

This section contains the steps for completing a local installation of ERDAS IMAGINE 8.7 software on a Windows 2000 or Windows XP Professional system. The dialogs used in the setup look the same regardless of system.

A local installation is one in which the ERDAS IMAGINE program files are run from the machine on which they are installed.

It is strongly recommended that you have full administrator privileges to install ERDAS IMAGINE on a Windows operating system.

If you attempt to install ERDAS IMAGINE on a a Windows 2000 or a Windows XP Professional system without Administrator privileges, a dialog opens instructing you that you are not able to install the software with the current privileges. Log out, log back in as a user with administrative privileges and then install IMAGINE.

Installing IMAGINE

Follow these instructions to install ERDAS IMAGINE.

1. Start Microsoft Windows.

   You should close all running applications before installing ERDAS IMAGINE.

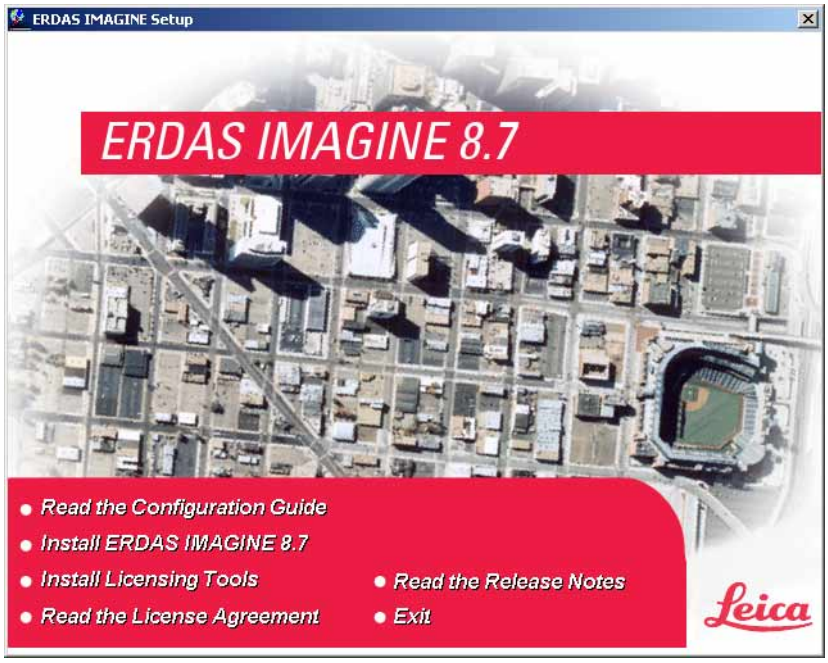
2. Log in as a user with full administrative privileges.

   You must be logged in as a user with full administrative privileges to successfully install ERDAS IMAGINE.

3. Insert the ERDAS IMAGINE installation CD into the CD-ROM drive.

   The ERDAS IMAGINE CD-ROM master panel opens automatically.



NOTE: If your preference settings deactivate the autorun, you can also access this panel by selecting **Start | Run** *from the Microsoft application bar and entering* **<CD-ROM>:\Autorun** *in the text box (where <CD-ROM> represents the drive letter of your CD-ROM drive).*

4. From the ERDAS IMAGINE CD-ROM master panel, click on the **Install ERDAS IMAGINE 8.7** to launch the setup options.

   Installing ERDAS IMAGINE 8.7 does not install the Example data used in the Tour Guides. To install the Example Data , you must run the separate Example Data installer after you have installed IMAGINE.

   The ERDAS IMAGINE CD-ROM master panel remains active in the background and the ERDAS IMAGINE V8.7 Setup window opens.

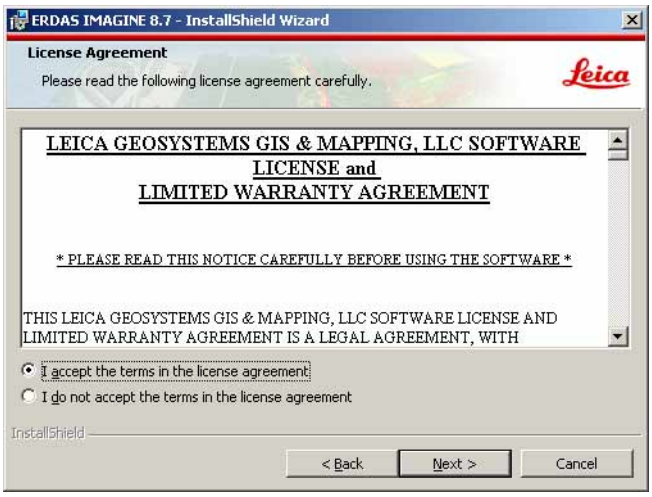
Installing IMAGINE

The Welcome dialog opens.

NOTE: If, at any time, you wish to terminate the ERDAS IMAGINE Setup, click on the **Cancel** *button located at the bottom of the dialogs, select* **Yes**, *and then click the* **Exit** *button located on the ERDAS IMAGINE CD-ROM master panel.*

1. Click **Next** in the Welcome dialog.

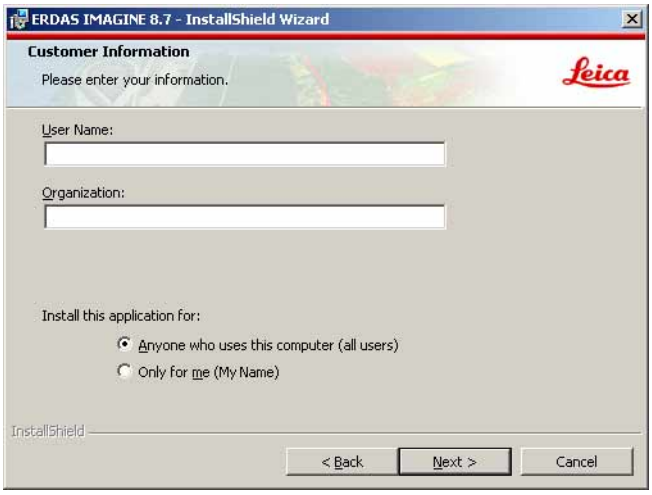
The License Agreement dialog opens. Please read the license agreement in its entirety. You can use the arrows or Page Down to view all of the ERDAS Software License and Limited Warranty Agreement.



2. If you agree to the terms and conditions set forth in the Leica Geosystems GIS & Mapping, LLC Software License Agreement, select the **I accept the terms in the license agreement** radio button. If not, select the I do not accept the terms in the license agreement radio button and click **Cancel** to exit the installation program.

3. If you accept the terms in the License Agreement, click **Next** in the License Agreement dialog.

   The Registration Information dialog opens. This dialog records your name and the name of your company.



4. Enter your name (or the Administrator's name) in the **User Name** text box.

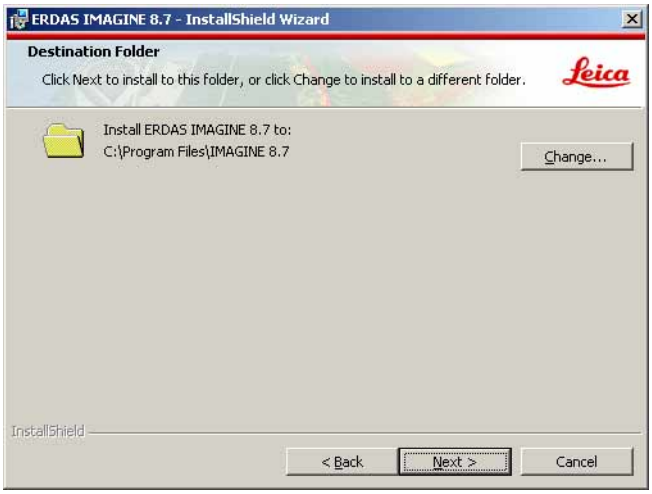
5. Press the Tab key to move the cursor into the **Organization** text box. Enter your Company name.

6. To install **IMAGINE** for all users who log into the system, select the **Anyone who uses this computer** radio button.

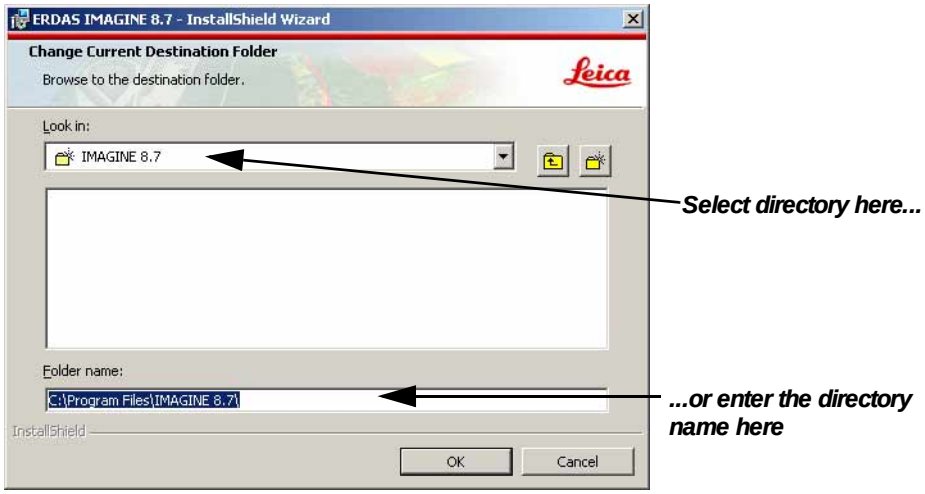
   To restrict access to **IMAGINE** to only the person who is currently logged onto the system, select the **Only for me** radio button.

7. Click the **Next** button at the bottom of the Registration Information dialog.

   The Destination Folder dialog opens. This dialog allows you to specify the name of the directory in which the IMAGINE files will be installed. All files required to run ERDAS IMAGINE are installed in this directory.



8. If you would like to change the installation directory, click the **Change...** button to access the Change Current Destination Folder dialog.



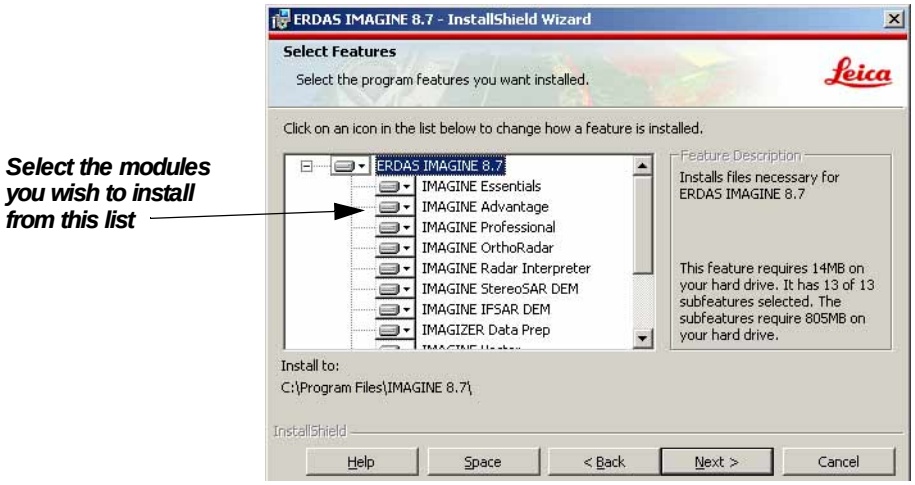
If you would like to create a new directory in which to install ERDAS IMAGINE, type the path in the text box or click the New Directory button  .

9. Click to select or type the directory in which you would like to install **ERDAS IMAGINE**.

10. Click the **OK** button to return to the Choose Destination dialog.

11. Click the **Next** button at the bottom of the Choose Destination dialog.

    The Select Features dialog opens. This dialog enables you to select the ERDAS IMAGINE modules you want to install.



NOTE: For an explanation of the icons and their meanings, click the Help button.

12. Click to select the ERDAS IMAGINE modules you want to install.

    For example, if you have purchased ERDAS IMAGINE Professional and Vector modules, and this is a new installation, you need to select at least the Essentials™, Advantage™, Professional™, Radar Interpreter, and Vector™ modules.

    The following table is provided to assist you when selecting modules to install.

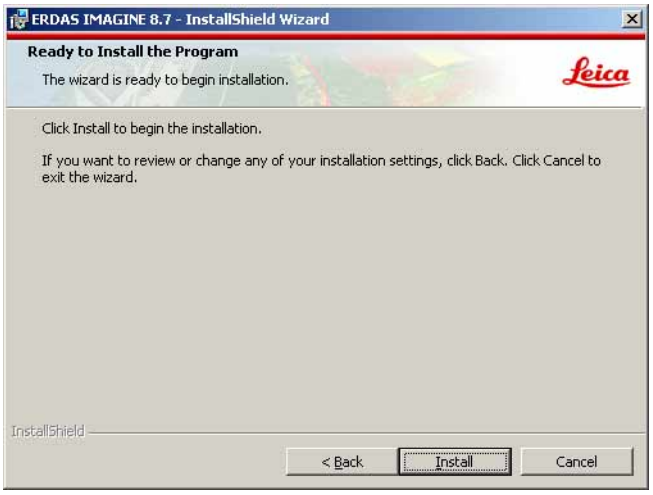
To Install These Modules...	... You Must Select These (or they must already be installed).												
	Essentials	Advantage	Professional	OrthoRadar	Radar Interpreter	StereoSAR DEM	IFSAR DEM	IMAGIZER Data Prep	Vector	VirtualGIS	NITF 2.1	LZW	Online Help
Essentials†	✓												
Advantage	✓	✓											
Professional	✓	✓	✓		✓								

To Install These Modules...	... You Must Select These (or they must already be installed).												
	Essentials	Advantage	Professional	OrthoRadar	Radar Interpreter	StereoSAR DEM	IFSAR DEM	IMAGIZER Data Prep	Vector	VirtualGIS	NITF 2.1	LZW	Online Help
OrthoRadar™	✓	✓		✓									
Radar Interpreter‡	✓				✓								
StereoSAR DEM™	✓	✓				✓							
IFSAR DEM™	✓	✓					✓						
IMAGIZER Data Prep	✓	✓						✓					
Vector	✓								✓				
VirtualGIS	✓									✓			
NITF 2.1	✓										✓		
LZW*	✓											✓	
Online Help	✓												✓

†IMAGINE Essentials includes the MrSID encoder that utilizes the MrSID compression technology patented by LizardTech.
‡The Radar Interpreter may be installed as an add-on module or as part of IMAGINE Professional. Either way, it must be selected explicitly.
*The LZW module is required to read .gif files which are based upon the LZW compression technology patented by UNISYS.

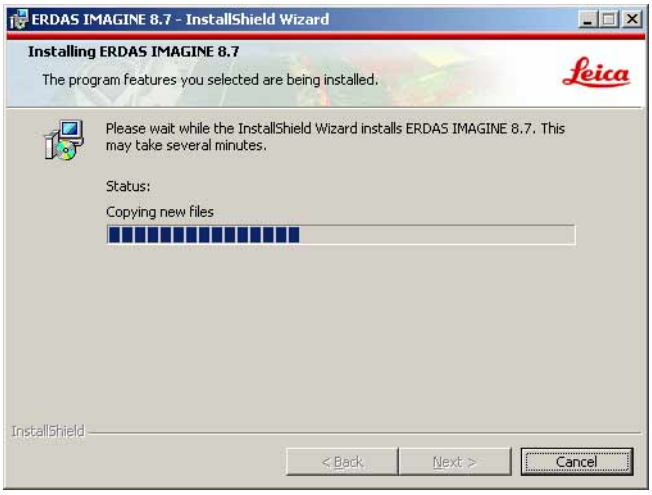
13. Click the **Next** button at the bottom of the Select Components dialog.

The Ready to Install dialog opens.



14. Click the **Install** button at the bottom of the Ready to Install dialog to begin the actual installation.

    A status bar displays, tracking the progress of the installation:



When the status bar reaches 100%, the **Installation Complete** dialog is displayed.

15. Check both the **Configure Formats** and **Launch License Manager** check boxes.

    Raster formats, vector formats, geometric models, resample methods, and the help index can only be configured by a user with Administrative privileges. If you deselect this checkbox, IMAGINE will configure all of the formats and indices the first time you run IMAGINE.

16. Click **Finish** in the Installation Complete dialog.

    The Leica Geosystems GIS & Mapping License Manager will display after the Installation process finishes. The License Manager allows you to license your installation of ERDAS IMAGINE.

    For information on using the License Manager and on setting up a license server, see "Software Licensing" on page 31.

Installing Example Data

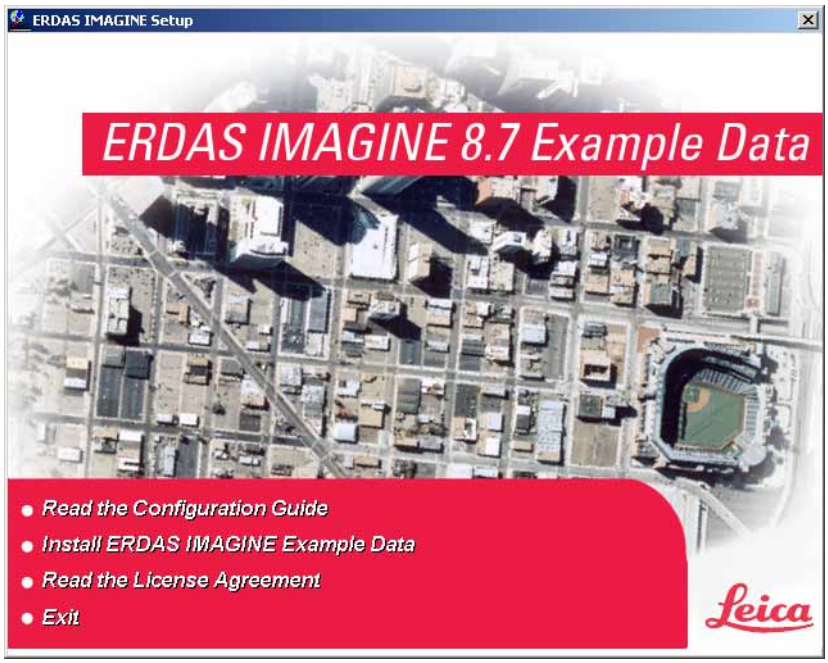
With IMAGINE 8.7, the Example data used in the Tour Guides is included on a separate CD-ROMs labeled ERDAS IMAGINE Data CD.

Installing ERDAS IMAGINE 8.7 will no longer automatically install the Example data. To install the Example Data, you must run the separate Example Data installer.

Installing Example Files from the Data CD

1. Insert the ERDAS IMAGINE Data CD into the CD-ROM drive.

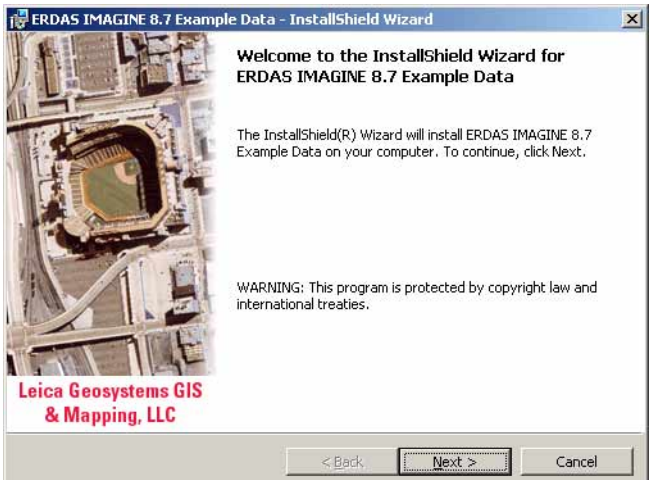
   The ERDAS IMAGINE CD-ROM master panel opens automatically.



NOTE: If your preference settings deactivate the autorun, you can also access this panel by selecting **Start | Run** *from the Microsoft application bar and entering* **<CD-ROM>:\Autorun** *in the text box (where <CD-ROM> represents the drive letter of your CD-ROM drive).*

2. From the ERDAS IMAGINE Data CD master panel, click on the **Install ERDAS IMAGINE Example Data** to launch the setup options.

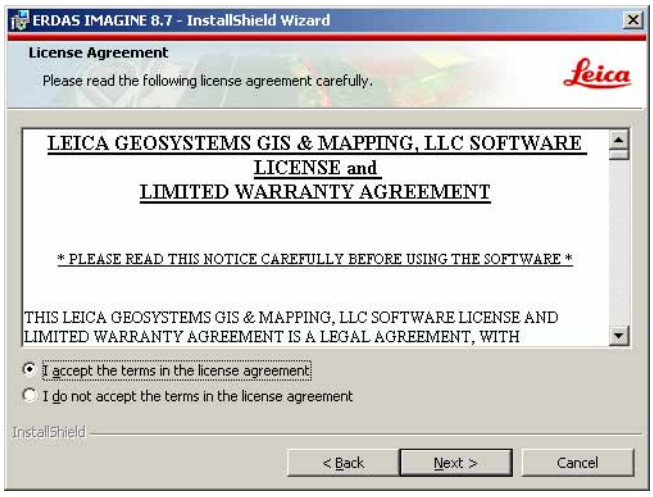
The ERDAS IMAGINE CD-ROM master panel remains active in the background and the Welcome dialog opens.



NOTE: If, at any time, you wish to terminate the ERDAS IMAGINE Setup, click on the **Cancel** *button located at the bottom of the dialogs, select* **Yes**, *and then click the* **Exit** *button located on the ERDAS IMAGINE CD-ROM master panel.*

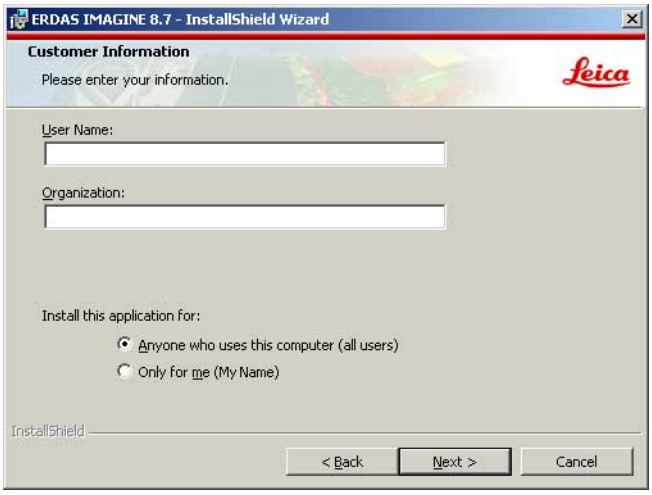
3. Click **Next** in the Welcome dialog.

The License Agreement dialog opens. You can use the arrows or Page Down to view all of the Leica Geosystems GIS & Mapping, LLC Software License Agreement.



4. If you agree to the terms and conditions set forth in the ERDAS Software License and Limited Warranty Agreement, select the appropriate radio button and click **Next** (if not, click **Cancel** to abort the installation).

   The Registration Information dialog opens. This dialog records your name and the name of your company.



5. Enter your name (or the Administrator's name) in the **User Name** text box.

6. Press the Tab key to move the cursor into the **Organization** text box. Enter your Company name.

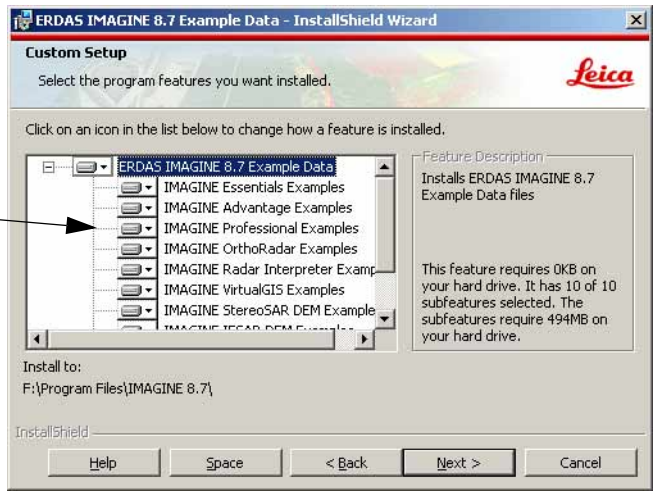
7. To install Example Data for all users who log into the system, select the **Anyone who uses this computer** radio button.

   To restrict access to the Example Data to only the person who is currently logged onto the system, select the **Only for me** radio button.

8. Click the **Next** button at the bottom of the Customer Information dialog.

   The Select Components dialog opens. This dialog enables you to select which Example Data sets you want to install.

Select the modules for which you wish to install example data from this list

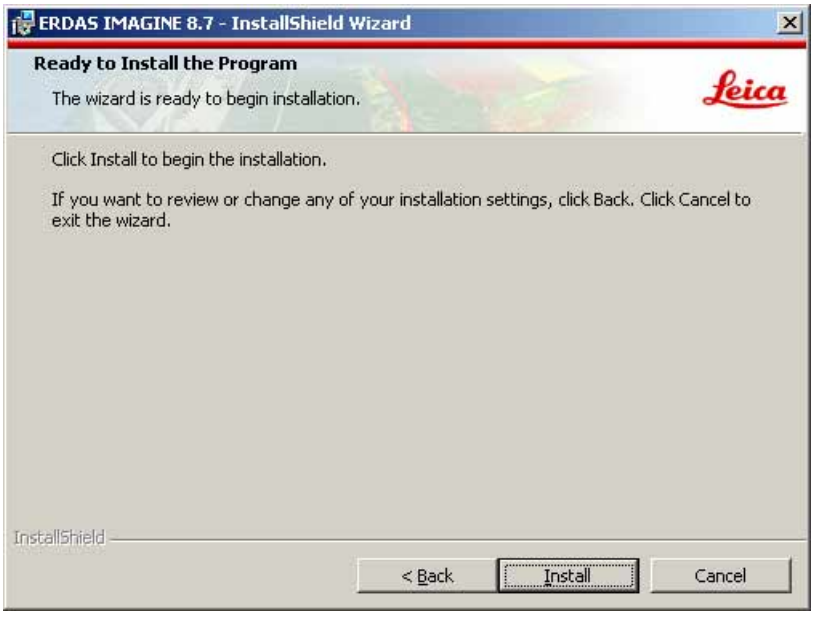


For an explanation of the icons and their meanings, click the Help button.

9. Click to select the ERDAS IMAGINE Example data you want to install.

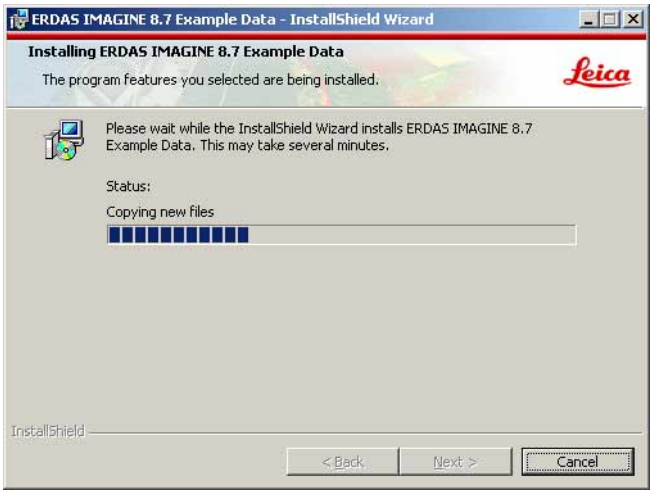
10. Click the **Next** button at the bottom of the Custom Setup dialog.

The Ready to Install dialog is displayed.

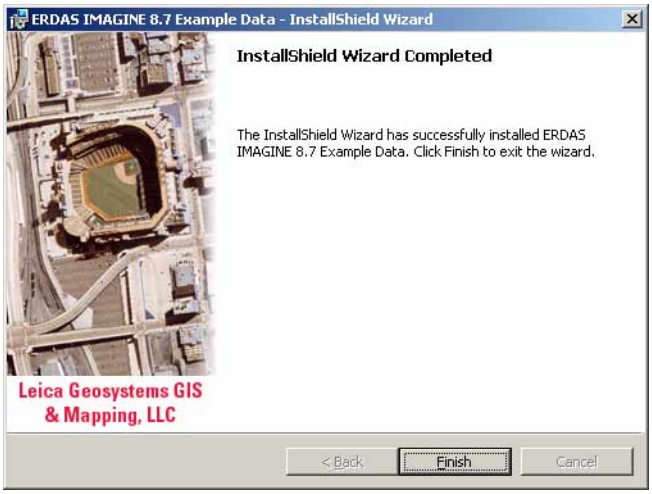


11. Click the **Install** button at the bottom of the Ready to Install dialog to begin installing the Example Data.

A status bar displays, tracking the progress of the installation.



When finished, the Installation Complete dialog opens:



12. Click **Finish** to close the installer.

Licensing IMAGINE 8.7

IMAGINE 8.7 uses a form of licensing called FLEXlm. This program will use a license file to secure all modules.

For information on Licensing IMAGINE and other Leica Geosystems software products, see "Software Licensing" on page 31.

Chapter 3

Installing Geodatabase Support

Description

This section contains the steps for installing support for ArcGIS Geodatabases in ERDAS IMAGINE. With IMAGINE, you will have common access to ArcGIS vector data sources.

If you have ArcGIS, ArcMap, ArcCatalog installed on your system, there is no need to install Geodatabase Support. IMAGINE will automatically interact with ArcGIS.

IMAGINE Geodatabase Support

ERDAS IMAGINE introduces the use of ESRI's ArcObjects environment to better interact with the latest generation of ArcGIS software and data formats. The use of ArcObjects means that ERDAS IMAGINE is better able to act as an "extension" to ArcGIS, providing advanced image processing and remote sensing capabilities, while transparently interacting with ESRI's new data formats, such as the Geodatabase.

The following is a list of the types of read-only operations which exist within ERDAS IMAGINE and which therefore can now be applied to the data sources accessed in the Geodatabase.

- Display vectors on top of an image
- Include vectors in a map composition
- Display attributes associated with vectors in a table or the new Form View
- Apply attribute-based symbolization to features
- Use features (points, lines, polygons) in supervised classification
- Use features in Spatial Models
- Use features in the Surfacing Tool
- Use features to define Areas of Interest (AOIs) to geographically constrain any type of process that supports AOIs.

The following list of types of edits would only apply to the Personal Geodatabase.

- Edit features (if the feature source is editable)
- Edit attributes (if the feature source is editable)
- Add/Create columns (if the feature source supports this)

Installing IMAGINE Geodatabase Support

Follow these instructions to install IMAGINE Geodatabase Support.

It is strongly recommended that you have full administrator privileges to install ERDAS IMAGINE on a Windows operating system.

If you attempt to install Geodatabase Support on a Windows system without Administrator privileges, a dialog opens instructing you that you are not able to install the software with the current privileges. Log out, log back in as a user with administrative privileges and then install Geodatabase Support.

13. Start Microsoft Windows.

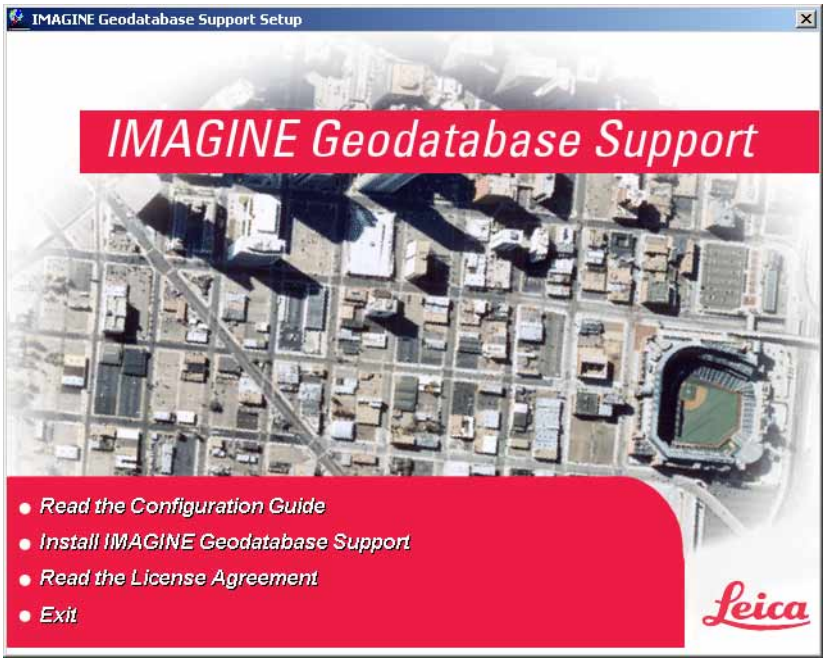
You should close all running applications before installing ERDAS IMAGINE Geodatabase Support.

14. Log in as a user with full administrative privileges.

You must be logged in as a user with full administrative privileges to successfully install ERDAS IMAGINE Geodatabase Support.

15. Insert the ERDAS IMAGINE Geodatabase Support installation CD into the CD-ROM drive.

The IMAGINE Geodatabase Support Setup master panel opens automatically.

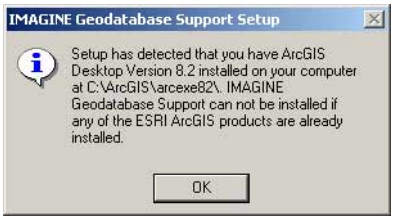


NOTE: If your preference settings deactivate the autorun, you can also access this panel by selecting **Start | Run** *from the Microsoft application bar and entering* **<CD-ROM>:\Autorun** *in the text box (where <CD-ROM> represents the drive letter of your CD-ROM drive).*

16. From the ERDAS IMAGINE CD-ROM master panel, click on the **Install IMAGINE Geodatabase Support** to launch the setup options.

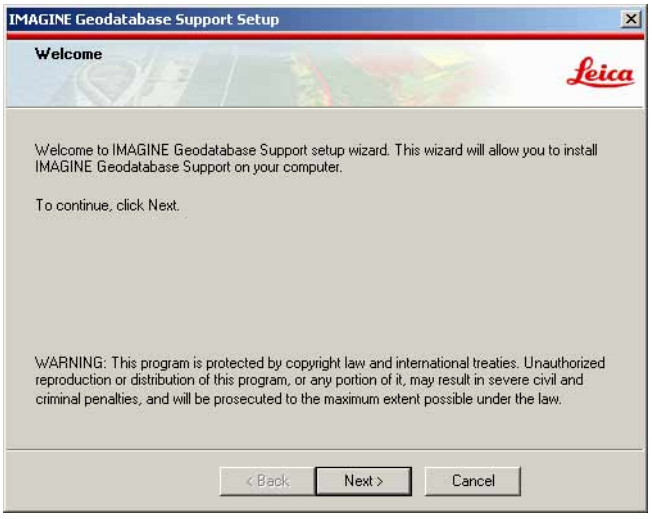
    The ERDAS IMAGINE CD-ROM master panel remains active in the background and the ERDAS IMAGINE Geodatabase Support Setup window opens and fills the screen.

    If you already have any of the ESRI ArcGIS products installed on your system, the following message is displayed, telling you that Geodatabase Support does not need be installed on a system with any of these products.

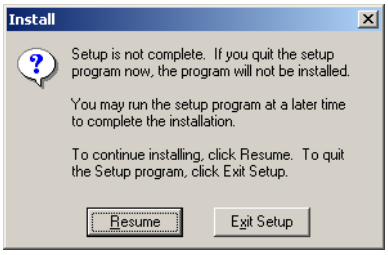


    Click **OK** to exit the installation.

    The Welcome dialog opens, which directs you to close running applications.

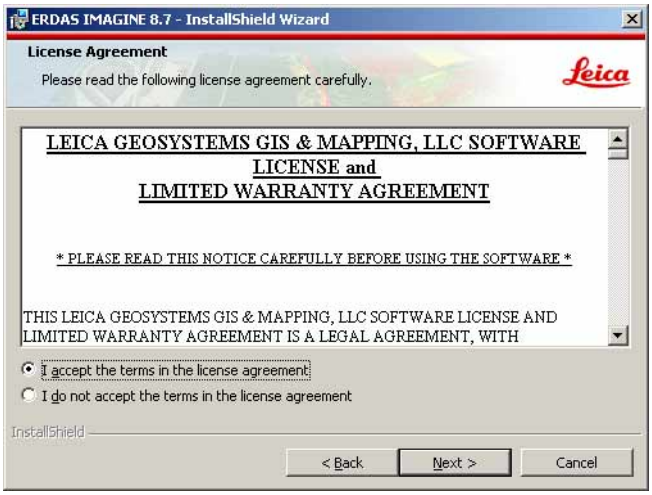


    NOTE: If, at any time, you wish to terminate the ERDAS IMAGINE Geodatabase Support Setup, click on the **Cancel** *button located at the bottom of the dialogs, select* **Exit Setup**, *and then click the* **Exit** *button located on the ERDAS IMAGINE Geodatabase Support CD-ROM master panel.*



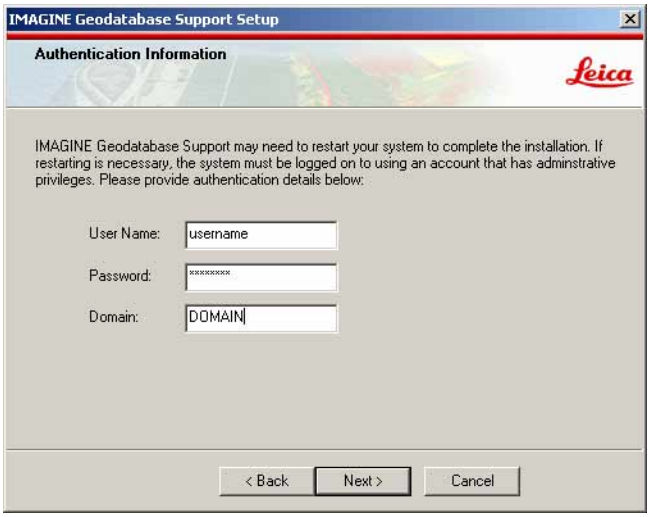
17. Click **Next** in the Welcome dialog.

The License Agreement dialog opens. You can use the arrows or Page Down to view all of the ERDAS Software License and Limited Warranty Agreement.



18. If you agree to the terms and conditions set forth in the ERDAS Software License and Limited Warranty Agreement, select the appropriate radio button and click **Next** (if not, click **Cancel** to abort the installation).

    The IMAGINE Geodatabase Support Setup dialog displays, informing you that your computer may need to be rebooted during the installation.

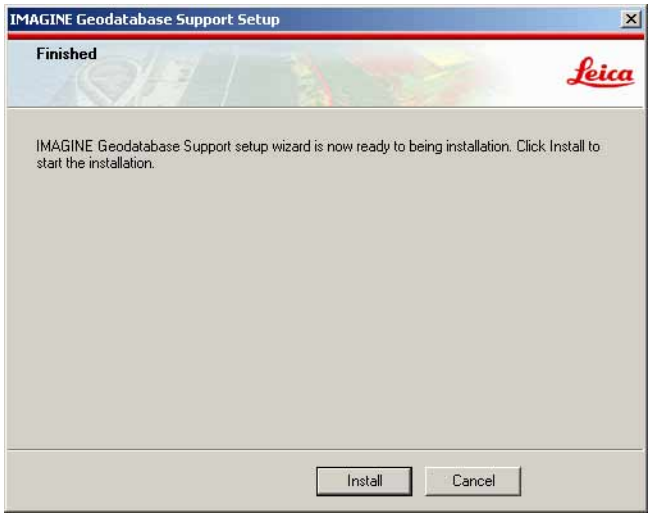


19. Enter the User Name and Password that you normally provide when logging on to your computer.

    If you do not normally provide authentication information when logging on to your computer, do not edit any fields on this dialog.

20. Click **Next**.

The Begin Installation dialog displays



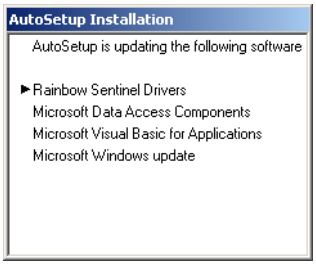
21. Click **Install** to begin the installation of IMAGINE Geodatabase Support.

Do not remove the IMAGINE Geodatabase Support CD-ROM from the drive while performing the installation.

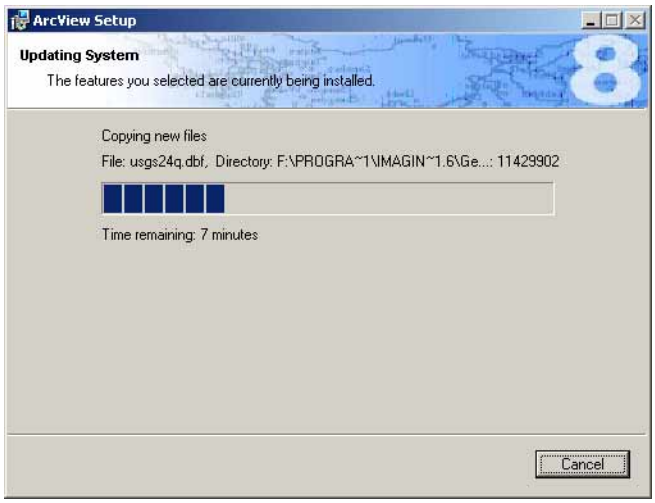
The Updating Windows Installer dialog displays.

Your computer will reboot and log back on using the information you provided in the Authentication Information dialog.

The Windows Update dialog will display once your computer has restarted. This dialog will track the progress of the first part of the Geodatabase Support installation.



When the first part of the installation is complete, your computer will reboot again and automatically log back on. The ArcView Setup dialog will display.



The ArcView Setup dialog will track the progress of the installation of Geodatabase Support. When the installation is complete, the Finished Installation dialog will open.

22. Click **OK** to close the installation program.

Section II

Licensing ERDAS IMAGINE

Chapter 4

Software Licensing

Description

Leica Geosystems software uses a form of licensing called FLEXlm. This program will use a license file to secure all modules.

For more information on using the FLEXlm Licensing Tools, see the FlexLM End Users Guide file provided in <Software_HOME>/help/hardcopy/enduser.pdf

You must have Administrative privileges to set or change the security settings on a Windows Operating System.

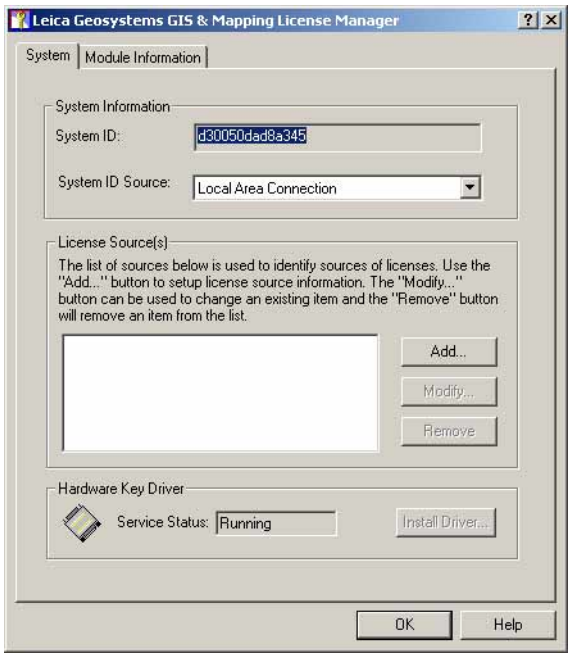
What you need to do before licensing your Software

- Get your System ID number. See “SystemID”.
- List the modules for which you need licenses.
- Determine the number of licenses you need.
- Determine the type of license you need (i.e., floating or node locked).
- If you are going to use floating licenses, install Leica Geosystems License Server on the server. See “Installing the License Server Tools” on page 44.

SystemID

The SystemID is the unique identification number used to identify your system. This number is needed to issue a license file to you.

To find your System ID, start the License Manager tool from the Windows Start menu. Select **Programs | Leica Geosystems GIS & Mapping | Licensing Tools | License Management**.



The **System ID** text box gives an ID of your system from the selected System ID Source. This ID is a unique ID derived from components of your system.

The **Source** popup list indicates the source of the system ID. The software can obtain ID numbers from the following sources:

- CPU IDs
- Hard Disk Serial Numbers
- Hardware Keys
- Network Cards (default)

You may change the System ID source by selecting an item from the Source popup list.

It is recommended that you select a System ID Source that will remain constant for as long as you will be using the software. For instance, you should not choose the network card associated with your laptop's docking station if you want to use the software while the laptop is not docked.

Removing the hardware used to obtain the System ID changes your System ID and will cause previous license files to be invalid. Contact Leica Geosystems to see about obtaining new license files.

The **License Source** names the computer that is running the ERDAS License Server. If the computer has no license file, this field will be blank.

The **Hardware Security Key Driver** section of the **SystemID** tab will only appear active if you have a hardware key from a previous version of IMAGINE installed on your system. The new Leica Geosystems software will install all new Sentinel drivers automatically. If the driver is not present, you may click the **Install Driver** button and follow the instructions.

Using Node Locked Licenses

Once you have identified your System ID, you can get a license file. You can request a license file online by visiting the Leica Geosystems GIS & Mapping Licensing webpage at http://gis.leica-geosystems.com/licensing/.

Customers outside of the USA should contact their local distributor for more information.

You will need to know the following information before you request your license file:

- The System ID number for the computer running the software.
- The modules for which you need licenses.

NOTE: Save the license file in an easily accessible location.

All node-locked license files will have the .lgl extension.

Installing a Node Locked License File

Once you have obtained your Node Locked license file keyed to the System ID for the machine on which the software is to be run, you can install it on the system.

Automatically Installing the License File

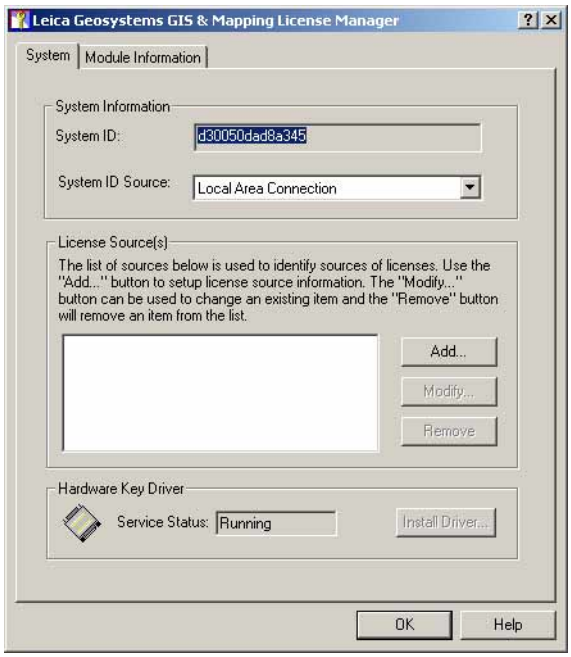
To install a license file, double-click on it in the Windows Explorer. The license file will be automatically loaded.

Manually Installing the License File

Advanced users may want to manually install the license file. Follow these steps to manually install the license file.

1. Start the License Manager tool from the Windows Start menu. Select **Programs | Leica Geosystems GIS & Mapping | Licensing Tools | License Management**.

   The License Manager dialog is displayed:

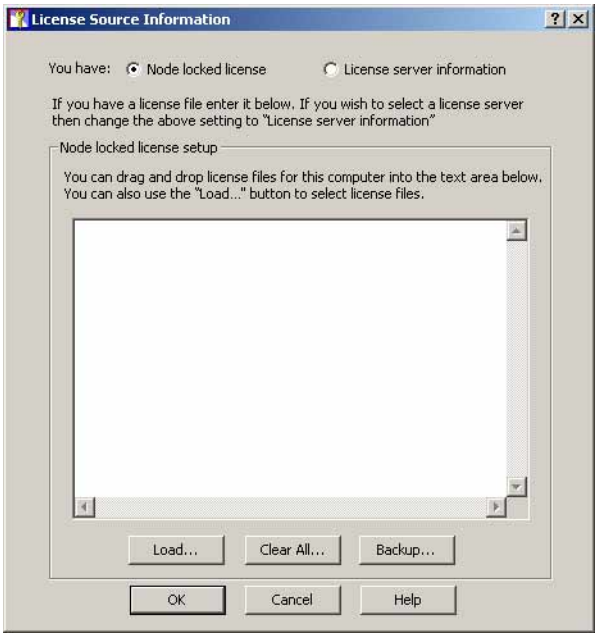


*Click the **Help** button for on-line help about loading the license file.*

2. Click the **Add** button in the License Source group.

   The License Source Information dialog is displayed.

3. Select the Node locked license radio button to display the Node locked license setup options.



4. Click **Load** to add the Node Locked license file.

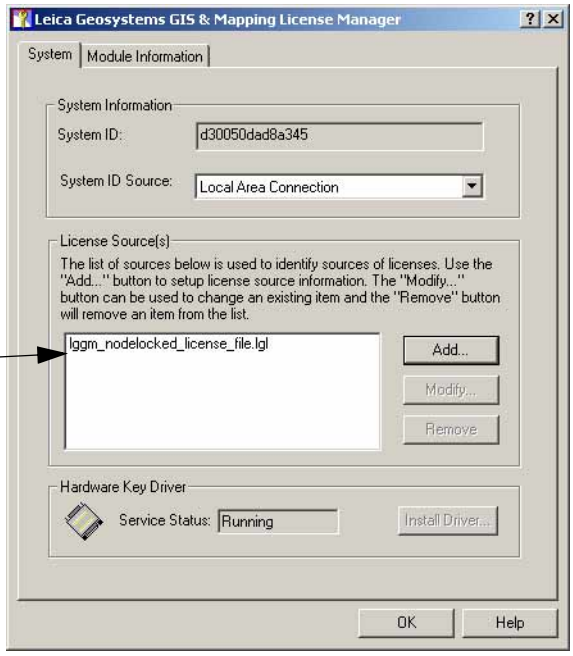
You may also Drag and Drop the .lgl file into the text area.

5. Browse to the location in which you saved the license file (.lgl) and click **Open**.

6. The License file is loaded into the Text Area of the Node locked license setup.

7. Click **OK**.

   The License Manager dialog is displayed. The new node-locked license source ("lggm_nodelocked_license_file.lgl") is displayed in the License Source field.



8. Click **OK** to dismiss the License Manager and begin using your Leica Geosystems software.

Merging New License Files

If you purchase new modules or multiple Leica Geosystems programs (such as ERDAS IMAGINE and Leica Photogrammetry Suite), you may receive multiple node locked license files. The new license files must be merged with the existing license files to run all of your software.

Automatically Merging the License File

To merge a license file, double-click on it in the Windows Explorer. The license file will be automatically merged with the previously loaded license file.

To Replace an existing license file, see "Replacing a License File" on page 37.

Manually Merging the License File

Advanced users may want to manually merge the license files. The steps for manually merging a license file are identical to the steps for "Installing a Node Locked License File" on page 33.

When you click **OK** to add your license file, it will automatically be merged with the existing file.

Checking for the New Modules

To check and ensure that your new license has been properly loaded, you can check the list of Licensed Modules for the upgraded modules.

1. From the Leica Geosystems GIS & Mapping License Manager, select the **Module Information** tab.

2. Make sure that **lggm_nodelocked_license_file.lgl** is selected in the **License Source** popup list.

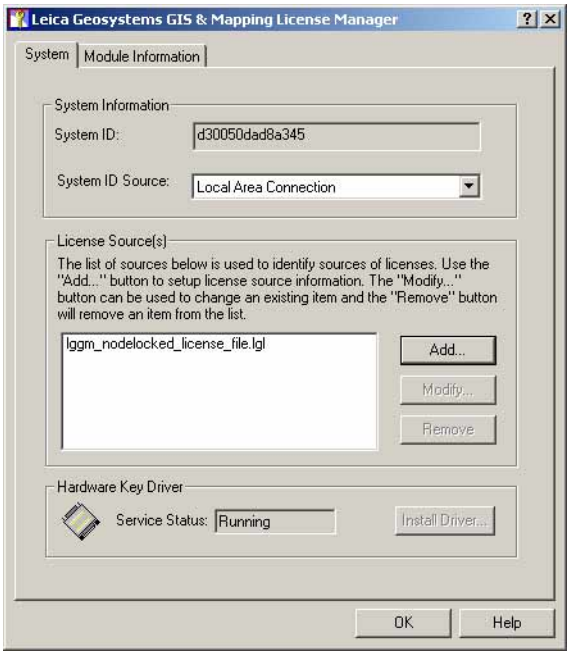
3. Scroll down and check to make sure your newly licensed software module and version is in the the list of licensed modules.

Replacing a License File

It may be necessary to completely replace the license file. To replace the license for an expired module or install a completely new license file, first perform the following steps:

1. Start the License Manager tool from the Windows Start menu. Select **Programs | Leica Geosystems GIS & Mapping | Licensing Tools | License Management**.

   The License Manager dialog is displayed:



*Click the **Help** button for on-line help about loading the license file.*

2. Select the lggm_nodelocked_license_file.lgl by clicking on it in the License Source field.

   The Modify and Remove buttons are activated.

3. Click **Remove**.

   A dialog opens asking if you would like to delete the license file from the hard disk.

4. If you would like to delete the license file from the disk, click **Yes**. Otherwise, click **No**.

5. Double-click on the new license file to install it in the License Manager.

6. Click **OK** to dismiss the Leica Geosystems GIS & Mapping License Manager dialog.

Your new license file has been installed and ERDAS IMAGINE is ready to run.

To manually install the license file, follow the instructions in "Manually Installing the License File" on page 33.

For instructions on replacing a license file on a license server, see "Replacing a License File on the Server" on page 51.

Using a Floating License Server

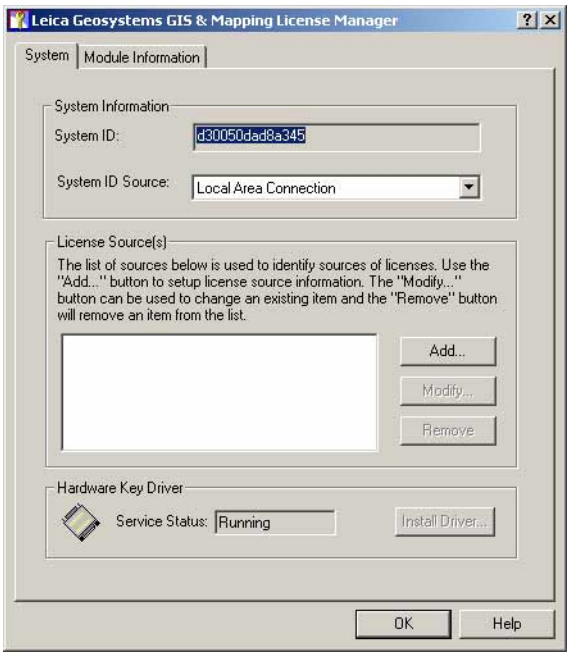
If you have already set up a License Server, you may add that server to the list of available licensing sources for this installation.

You must configure the License Server and start the License Service before attempting to use a floating license.

For instructions on configuring a license server, see"Setting Up a License Server" on page 48.

1. Log on to the machine running Leica Geosystems software as a user with Administrative privileges.
2. Click **Start | Programs | Leica Geosystems GIS & Mapping License Tools | License Manager**.

   The Leica Geosystems License Manager dialog opens.

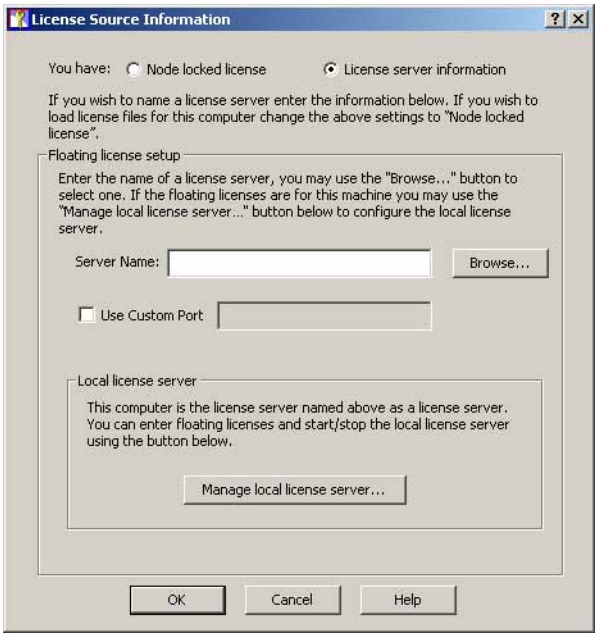


*Click the **Help** button for on-line help about specifying a license file server.*

3. Click the **Add** button in the License Source group.

   The License Source Information dialog is displayed.

4. Select the **License server information** radio button to display the License Server setup options.



5. Enter the name of the computer that has been configured as the License Server in the Server Name field.

You may also **Browse** *to the license server.*

6. If the license server is running on a non-standard port, select the **Use Custom Port** checkbox and enter the port number.

7. Click **OK**.

If There Is No License Server Found

If there is no license server configured on the chosen system, the following message is displayed.

8. Double-check the Server Name and port number.

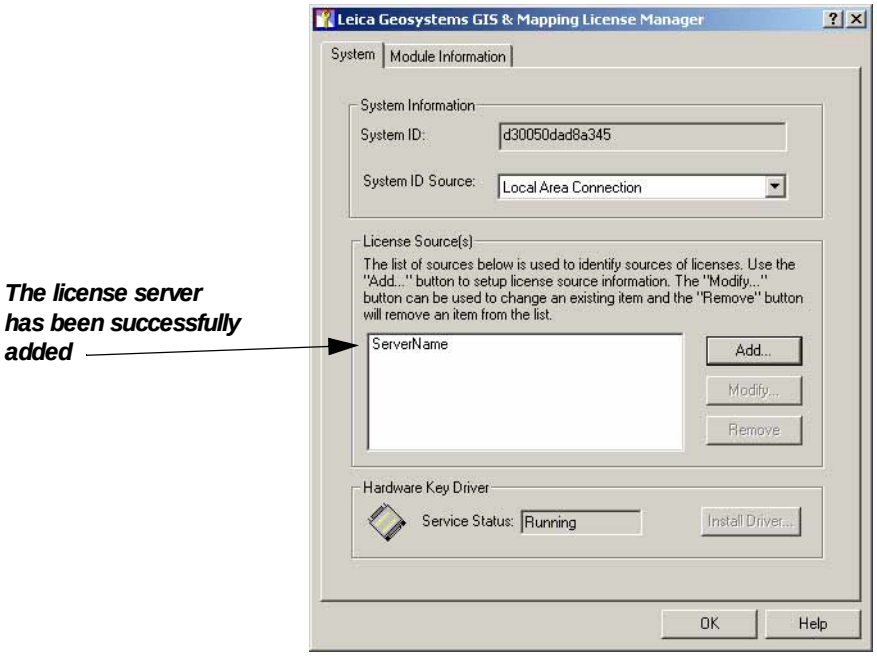
9. If the Server name and port number are correct, click **Yes** to add the license server, and then make sure the license server on that machine was set up correctly and the license service has been started.

If the server name or port number was incorrect, click **No**, and enter the correct server name or **Browse** to the correct server.

10. Click **OK** on the License Source Information dialog.

License Server Successfully Added

If the License Server has been successfully added, the License Manager is displayed. The License Source field reflects the addition of the Floating License Server.



11. Click **OK** to dismiss the License Manager and begin using your Leica Geosystems software.

Chapter 5

Configuring the License Server

Description

This chapter explains the steps for preparing your Windows system to run the Leica Geosystems GIS & Mapping License Server. There are two main sections to this chapter, installing the License Server and Setting up the License Server.

The license tools are installed as part of every Leica Geosystems software package, such as ERDAS IMAGINE. If you have already installed Leica Geosystems Software, you can find instructions for configuring the License Server in "Setting Up a License Server" on page 48.

You only need to install the License Tools if the machine you are setting up to serve licenses over the network does not have Leica Geosystems software installed on it.

The system setup and the software installation should be performed by an Administrator who is familiar with the Windows system and its documentation.

It is strongly recommended that you have full administrator privileges to install the License Tools on a Windows operating system.

If you attempt to install the License Tools on a Windows system without Administrator privileges, a dialog opens instructing you that you are not able to install the software with the current privileges. Log out, log back in as a user with administrator privileges and then install the License Tools.

Leica Geosystems Software Security

When performing an installation with node-locked licensing, security is built-in and automatic. Each computer is individually secured with its own license file. If circumstances dictate, as in the case of an installation with remote licensing, you can secure all copies of the software from a single computer, called the License Server.

Leica Geosystems software security is optionally controlled through the use of the License Server program that is always running on at least one computer in the network. The License Server secures all copies of Leica Geosystems software that operate on the network. Each License Server must have a license file. You can request a license file from the Leica Geosystems Licensing web page at http://www.gis.leica-geosystems.com/Licensing/.

If you wish to use remote licensing, you must determine on which workstation(s) the security program, Leica Geosystems License Server, is going to reside before you begin installing software.

All Leica Geosystems programs communicate with the License Server using Transport Control Protocol/Internet Protocol (TCP/IP). TCP/IP must be configured on each machine that relies on the License Server for security.

See your Windows documentation or on-line help for more information on TCP/IP.

Two tasks must be performed prior to accessing a remote license server:

- Start TCP/IP services on all workstations relying on the remote license server for their licenses. For information on starting TCP/IP services, see "Start TCP/IP Services" on page 52.
- Start the License Server.

If you are installing the License Server software on a computer that is connected to a network with other computers running Leica Geosystems software, perform the procedures below.

For more information on using the FLEXlm Licensing Tools, see the FlexLM End Users Guide located in <Software_HOME>/help/hardcopy/enduser.pdf

Installing the License Server Tools

Use these instructions to install the ERDAS License Server on the computer connected to a network.

If you have installed ERDAS IMAGINE 8.7 on this system, the Licensing Tools have already been installed. See "Setting Up a License Server" on page 48 to configure the License Server.

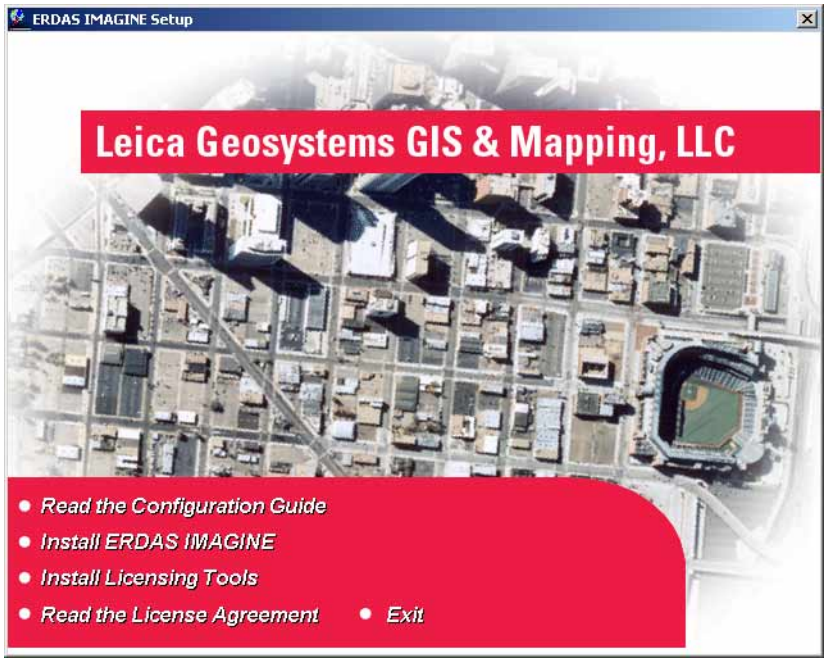
1. Start Microsoft Windows.

   You should close all running applications before installing ERDAS IMAGINE.

2. Insert the Installation CD into the CD-ROM drive.

   The CD-ROM master panel opens automatically

.



NOTE: If your preference settings deactivate the autorun, you can also access this panel by selecting **Start | Run** *from the Microsoft application bar and entering* **<CD-ROM>:\Autorun** *in the text box (where <CD-ROM> represents the drive letter of your CD-ROM drive).*

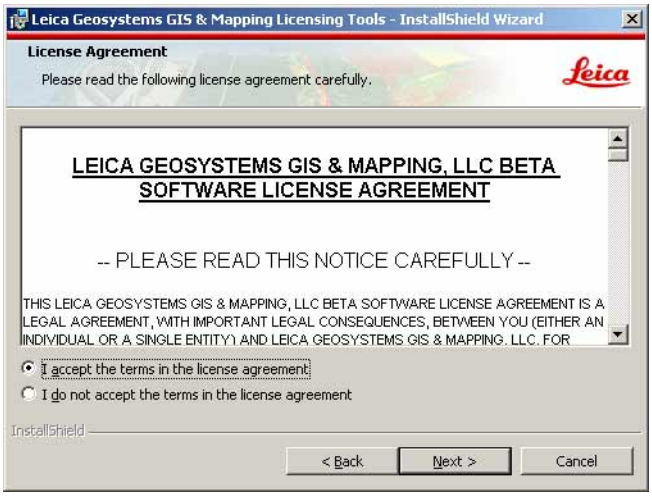
3. From the CD-ROM master panel, click on the **Install Licensing Tools** to launch the setup options.

   The Welcome dialog opens.

NOTE: If, at any time, you wish to terminate the Leica Geosystems GIS & Mapping Licensing Tools Setup, click on the **Cancel** *button located at the bottom of the dialogs, select* **Exit Setup**, *and then click the* **Exit** *button located on the CD-ROM master panel.*

1. Click **Next** in the Welcome dialog.

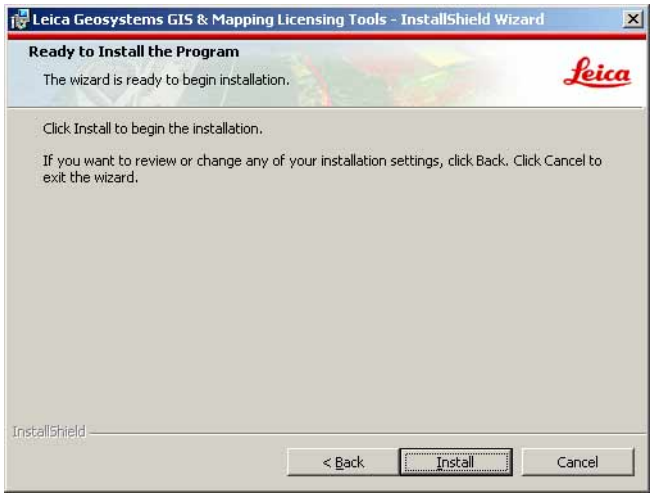
   The License Agreement dialog opens. You can use the arrows or Page Down to view all of the Leica Geosystems GIS & Mapping, LLC Software License and Limited Warranty Agreement.



2. If you agree to the terms and conditions set forth in the Leica Geosystems GIS & Mapping, LLC Software License Agreement, select the **I accept the terms in the license agreement** radio button. If not, select the I do not accept the terms in the license agreement and click **Cancel** to exit the installation program.

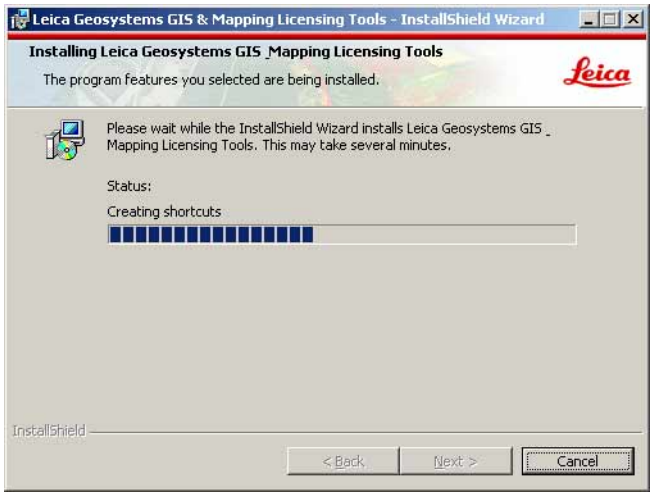
3. If you accept the terms in the License Agreement, click **Next** in the License Agreement dialog.

   The Ready to Install dialog opens.

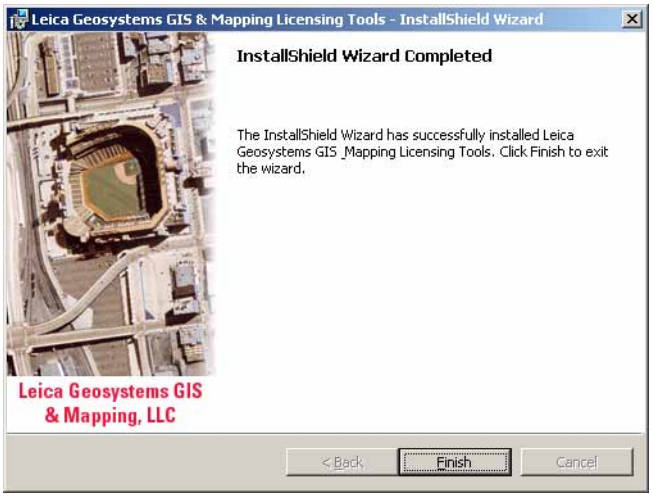


4. Click the **Install** button at the bottom of the Ready to Install dialog to begin the actual installation.

   A status bar displays, tracking the progress of the installation:



When the status bar reaches 100%, the **Installation Complete** dialog is displayed.



5. Click **Finish** to close the Installation Wizard.

Setting Up a License Server

Now that you have installed the Leica Geosystems GIS & Mapping License Server you are ready to load your floating licenses.

Before you load a new license file or change an existing license file, you must make sure that the license service has been stopped.

Licensing Leica Geosystems Software

Once the License tools are installed, you need to obtain a floating license file. You may request a license file from the Leica Geosystems web page at http://gis.leica-geosystems.com/licensing/. You will need to know the following information before you request your license file:

- The System ID number for the computer running the Install License Server.
- The name of the computer on which the License Server program was installed.
- The modules for which you need licenses.
- The number of licenses you need for each module.

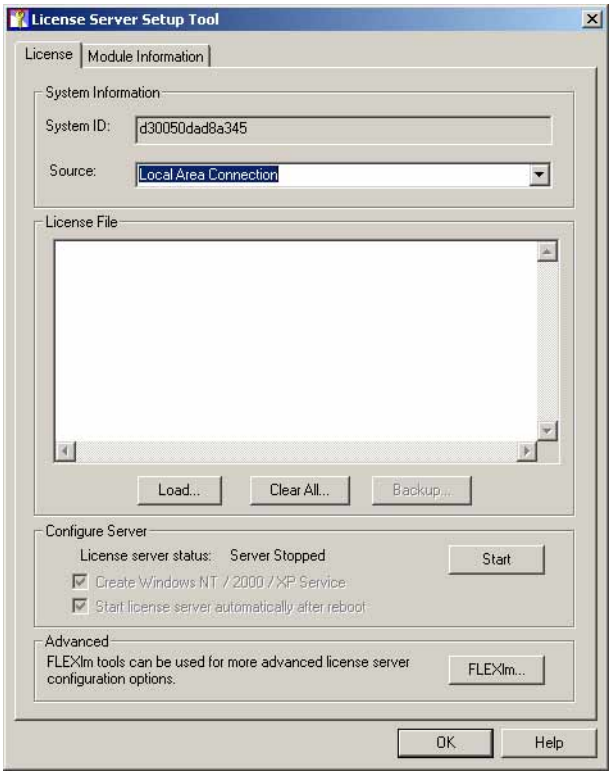
NOTE: Save the license file in an easily accessible location.

All floating license files will have the .lgs extension.

Adding a License File

Stopping the License Service

1. Select **Start | Programs | Leica Geosystems GIS & Mapping | Licensing Tools | License Server Setup**. The License Server Setup Tool dialog displays.



2. If the License server status in the Configure Server group is **Running**, click **Stop**.

Automatically Installing the License File

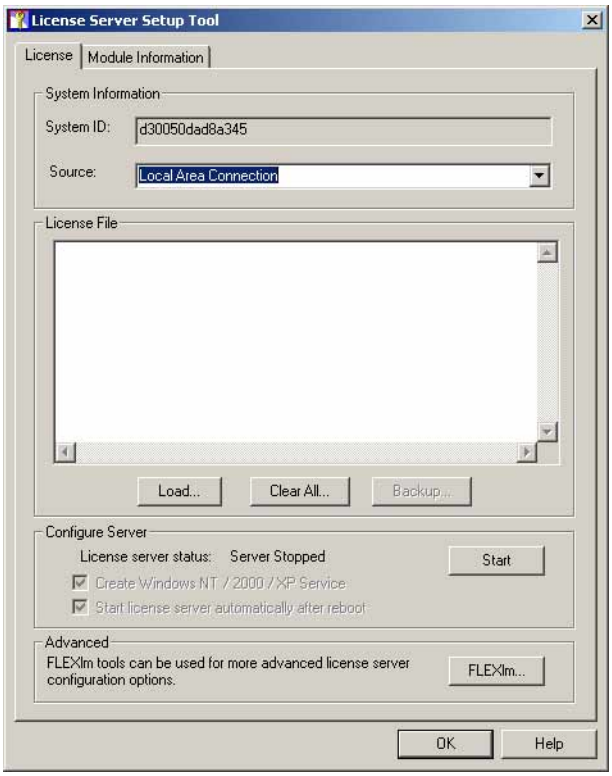
To automatically install a license file, double-click on it in the Windows Explorer. The license file will be automatically loaded.

Manually Installing the License File

Advanced users may want to manually install the license file. Follow these steps to manually install the license file.

In order to properly run the Install License Server setup, you must have administrative privileges.

1. Select **Start | Programs | Leica Geosystems GIS & Mapping | Licensing Tools | License Server Setup**. The License Server Setup Tool dialog displays.



Before you load a new license file or change an existing license file, you must make sure that the license service has been stopped.

2. Click on the **Load** button. The Open file dialog opens and lets you browse to the License file location.

You can also drag and drop the license file into the License File area.

3. Select the license file and click **Open** to dismiss the dialog.

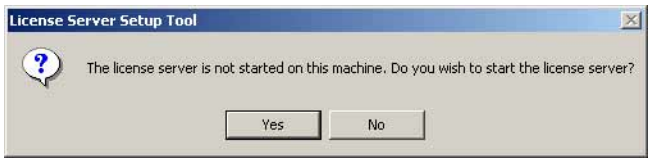
   The contents of the License file are loaded into the License Server Setup Tool.

4. Make sure that the **Create Windows NT/2000/XP Service** button is selected.

5. Select the **Start license server automatically after reboot** checkbox to have the license server autostart every time the Operating System is rebooted.

6. Click **OK** to dismiss the Leica Geosystems License Server Tools dialog.

   The following dialog is displayed:



7. To begin serving licenses over the network, click **Yes**. If you have additional licenses to add, click **No** and proceed to "Merging a New License on the Server"

Merging a New License on the Server

If you are going to license several different Leica Geosystems software products from the same license server, or if you received more than one license file to serve you will need to merge the additional licenses on the license server.

Automatically Merging the License File

To automatically merge a license file, double-click on it in the Windows Explorer. The license file will be automatically merged with the existing file.

Manually Merging the License File

Advanced users may want to manually merge the license file. Follow these steps to manually merge the new license file with the existing license file

It is highly recommended that you **Backup** *your old license file before proceeding.*

1. Perform the steps in “Manually Installing the License File” on page 49.
2. In the following message box, click **Yes** to merge the license files.

Note that the license field changes to show the information in your new license.

3. Click the **Start** button to start the license server.
4. Click **OK** to dismiss the Leica Geosystems GIS & Mapping License Server Setup Tool.

Your new license file has been installed and your software is ready to run.

Replacing a License File on the Server

It may be necessary to completely replace the license file. To replace the license for an expired module or install a completely new license file, perform the following steps:

1. Select **Start | Programs | Leica Geosystems GIS & Mapping | Licensing Tools | License Server Setup**. The License Server Setup Tool dialog displays.
2. Click the **Clear All...** button.
3. Click **Yes** to clear the contents of the License File field.

4. Perform the steps for "Adding a License File" on page 49.

Start TCP/IP Services

Every computer that will be using the License Server to license Leica Geosystems software must have the TCP/IP services properly configured. To install TCP/IP services on these machines, use the following procedure:

1. Select **Start | Settings | Control Panel** from the Microsoft task bar.
2. Double-click the Network icon.
3. Click the **Protocols** tab in the Network dialog.
4. If **TCP/IP Protocol** is not listed under **Network Protocols**, add it using the **Add** button.
5. The hostname and the IP address of each computer which will be using the License Server to license Leica Geosystems software must be listed in your hosts file or be accessible through a Domain Name Server (DNS). To edit the hosts file, use Notepad to open (or create) the directory called **<WindowsDir>\system32\drivers\etc\hosts** for Windows NT 4.0 and 2000.

Customizing the License Servers

The FLEX*lm* Licensing software will allow you to customize to the License Servers. To accomplish this, use the Tools in **Start | Programs | ERDAS License Tools | FLEXlm Tools**.

For more information on using the FLEXlm Licensing Tools, see the FlexLM End Users Guide located in <IMAGINE_HOME>/help/hardcopy/enduser.pdf.

Section III

Configuring ERDAS IMAGINE

Chapter 6

Configure Tablet Digitizer

Description

This section explains how to set up a tablet digitizer so that it can be accessed by Leica Geosystems software programs and utilities. These instructions are not included with the documentation which accompanies the hardware listed below.

The tablet digitizers that can be used by Leica Geosystems software are as follows:

- Altek Series Model AC32 Moveable Menu
- Altek Series Model 33240 Tablet
- CalComp 9100 and 9500 Series
- CalComp Drawing Board II and III
- GTCO Accutab Series Custom Configuration Menu
- GTCO DIGI-PAD Series

The system setup and configuration should be performed by an Administrator who is familiar with the tablet digitizer, the computer you are using, and their documentation.

Select a Serial Line

Most computers have at least two serial lines, called COM1 and COM2. Select a serial line that you can permanently dedicate to the digitizing tablet.

Connect Tablet Digitizer

The proper RS232 cable is required to connect the digitizing tablet to the computer. Below is a list of the connections that need to be made between two 25-pin ports. The cable you use varies depending upon the genders of the ports.

Table 6-1: Tablet Digitizer Connections

Workstation End	Tablet Digitizer End
pin 1	pin 1
pin 2	pin 3
pin 3	pin 2
pin 7	pin 7

Switch Settings and Formats

When you are using Leica Geosystems software with the supported tablet digitizers, we recommend the specified switch settings and data formats.

Altek Series Model AC32 Moveable Menu

Table 6-2: AC32 Moveable Menu Settings

Serial Speed	9600 bps
Serial Misc.	1 stop bit / 8 data bits / No parity
Emulation	ALTEK
Format F12[a]	F XXXXX YYYYY
Rate	50 pts/sec
Resolution	.001 inch
Run Type	Type 1
Mode	Point
Miscellany	CR on / LF on / CTS off

[a] This format corresponds with the ALTEK format number 4.

Altek Series Model 33240 Tablet

Table 6-3: Switch Settings for the Left Bank

ERDAS IMAGINE Format	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7	Switch 8
1	on	off	on	on	on	on	on	off
2	on	off	on	on	on	on	on	off
3	on	off	on	on	on	on	on	off
4*	on	off	on	on	on	on	on	off
5	on	off	on	on	on	on	on	off
6	on	off	on	on	on	on	on	off
7	on	off	on	on	on	on	on	off

Table 6-4: Switch Settings for the Right Bank

ERDAS IMAGINE Format	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7	Switch 8
1	on	off	off	off	on	on	on	on
2	on	off	off	off	on	on	on	off
3	on	off	off	off	on	on	off	on
4*	on	off	off	off	on	on	off	off
5	on	off	off	off	on	off	on	on
6	on	off	off	off	on	off	on	off
7	on	off	off	off	on	off	off	on

**Format 4 is the default. ERDAS IMAGINE does not support format 6. You may need to use a swap cable.*

CalComp 9100 Series

Table 6-5: Switch Settings for SB1

ERDAS IMAGINE Format	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7[a]	Switch 8[a]
1	close	open	close	close	close	close	close	open
2	close	open	close	open	close	close	close	open
3	close	open	open	close	close	close	close	open
4*	close	open	open	open	close	close	close	open

[a] These settings are set at the factory and should not be changed.

**Format 4 is the default.*

Table 6-6: Switch Settings for SW1

	SW1 Switch 1	SW1 Switch 2	SW1 Switch 3	SW1 Switch 4	SW1 Switch 5	SW1 Switch 6	SW1 Switch 7	SW1 Switch 8
All ERDAS IMAGINE Formats	open	open	close	close	open	close	close	open

Table 6-7: Switch Settings for SW2

	SW2 Switch 1	SW2 Switch 2	SW2 Switch 3	SW2 Switch 4	SW2 Switch 5	SW2 Switch 6	SW2 Switch 7	SW2 Switch 8
All ERDAS IMAGINE Formats	close	open	close	open	close	close	close	close

CalComp 9500 Series

Table 6-8: Operating Mode and Resolution Switch Settings for Area 1

Operating Mode	Switch
Point	on
Run	off
Track	off
Line	off
INC	off
Prompt	off

Resolution (1000 LPI)	Switch
1	off
2	on
3	on

Table 6-9: Soft Switch Settings for Area 1

ERDAS IMAGINE Format	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
1	off	off	on	off	off
2	off	off	on	off	on

Table 6-9: Soft Switch Settings for Area 1 (Continued)

ERDAS IMAGINE Format	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
3	off	off	on	on	off
4*	off	off	on	on	on

**Format 4 is the default.*

Table 6-10: Switch Settings for Area 2 (Port A) Only

Baud Rate (9600)	Switch
1	off
2	off
3	on

Data Bits	Switch
7	off
8	on

Parity (none)	Switch
1	on
2	off
3	off

Stop Bit	Switch
Stop 1	off
Stop 2	off

Transmit/ Receive	Switch
TX 2/3	on

Line Feed	Switch
LF	off

Port A	Switch
Port	on

Echo	Switch
Echo	Off

The switch settings for CalComp 9500 areas 3 (Port B), 4, and 5 are not applicable.

CalComp Drawing Board II and III

Table 6-11: Soft Switch Settings for A

ERDAS IMAGINE Format	Switch 1	Switch 2	Switches 3-5	Switches 6-10	Switches 11-13	Switch 14	Switch 15	Switch 16	Switch 17	Switch 18
1	off	on	off	on	off	on	off	off	off	on
2	off	on	off	on	off	on	off	on	off	on
3*	off	on	off	on	off	on	on	off	off	on
4	off	on	off	on	off	on	on	on	off	on

Table 6-12: Soft Switch Settings for B

	Switches 1-2	Switches 3-4	Switches 5-7	Switch 8	Switches 9-17	Switch 18
All ERDAS IMAGINE Formats*	off	on	off	on	off	on

Table 6-13: Soft Switch Settings for C (Drawing Board III Only)

	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7
All ERDAS IMAGINE Formats	off	off	off	off	off	N/A	off

**Format 3 is the default.*

GTCO Accutab Series Custom Configuration Menu

Table 6-14: GTCO Accutab Configuration

Communication Options	
Baud	9600
Data Bits	8
Stop Bits	1
Parity	None

Mode Options	
Mode	Point
Resolution	1000 lpi

Menu Codes	
ERDAS IMAGINE 8.X	04*

Output Format Options	
GTCO	ASCII

**Format 4 is the same as ERDAS IMAGINE format 7.*

GTCO DIGI-PAD Series

Table 6-15: Switch Settings for S1

	S1 Switch 1	S1 Switch 2	S1 Switch 3	S1 Switch 4	S1 Switch 5	S1 Switch 6	S1 Switch 7	S1 Switch 8
All ERDAS IMAGINE Formats	off	off	on	on	off	off	off	on

Table 6-16: Switch Settings for S2

ERDAS IMAGINE Format	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7	Switch 8
1	off	off	on	on	off	off	off	off
2	off	on	on	on	off	off	off	off
3	on	off	on	on	off	off	off	off
4	on	on	on	on	off	off	off	off
5	off	off	on	on	on	off	off	off
6	off	on	on	on	on	off	off	off
7*	on	off	on	on	on	off	off	off
8	on	on	on	on	on	off	off	off

**Format 7 is the default. You may need to use a swap cable with port B, but not with port A.*

Table 6-17: Switch Settings for S3

	S3 Switch 1	S3 Switch 2	S3 Switch 3	S3 Switch 4	S3 Switch 5	S3 Switch 6	S3 Switch 7	S3 Switch 8
All ERDAS IMAGINE Formats	off	off	off	off	on	off	off	off

Connect to HyperTerminal

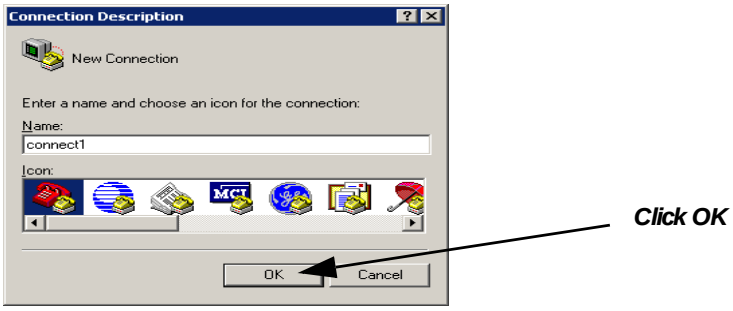
Once you connect the tablet digitizer to a COM port on your computer, perform the following procedures to ensure that the two are communicating.

From the Microsoft task bar, select **Start | Programs | Accessories | Hyperterminal | HyperTerminal**.

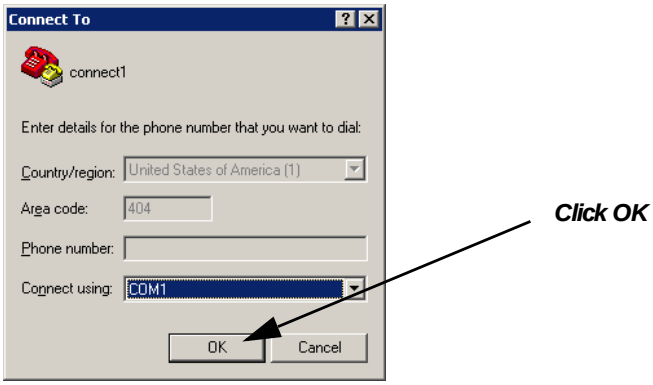
NOTE: If this is the first time you have accessed the HyperTerminal, you are instructed to enter information regarding location and modem. Follow the instructions, then proceed as directed below. If you do not have a modem, click **No** *in the HyperTerminal message box.*

The HyperTerminal dialog opens along with the Connection Description dialog.

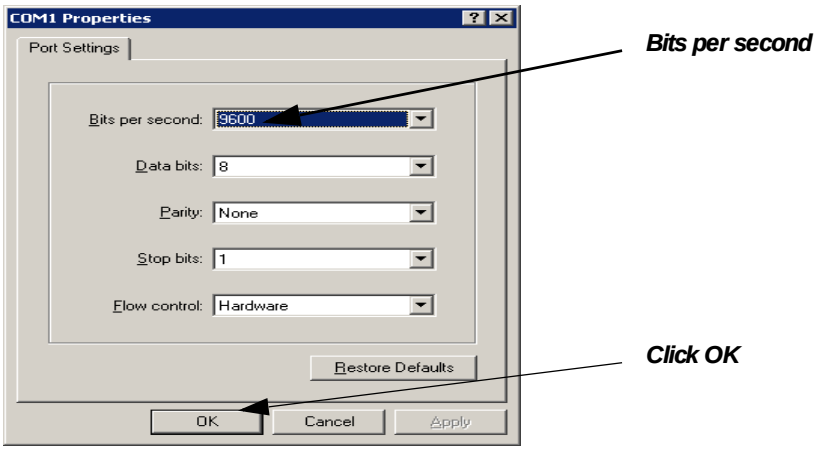
6. In the Connection Description dialog, enter a name for the connection, and click **OK**.



7. In the Connect To dialog, confirm that the **Connect using** field correctly identifies the port to which the tablet digitizer is attached, and click **OK**.

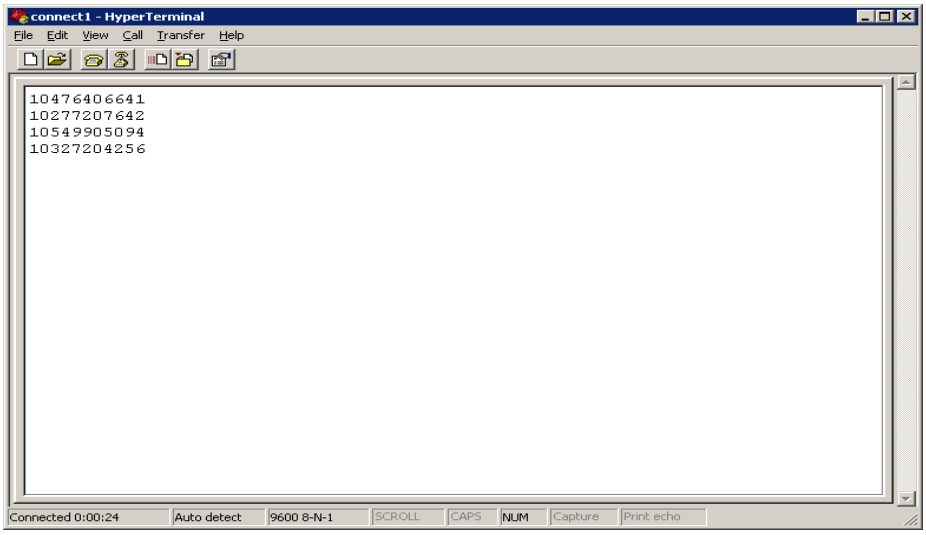


The COM1 Properties (or COM2 if you selected it in the **Connect using** field) dialog opens:



8. Change the **Bits per second** to **9600**, and then click **OK**.

   To confirm that the tablet digitizer is functioning correctly, use the pointing device to click various areas on the tablet digitizer. The data is presented in the HyperTerminal window as depicted below:



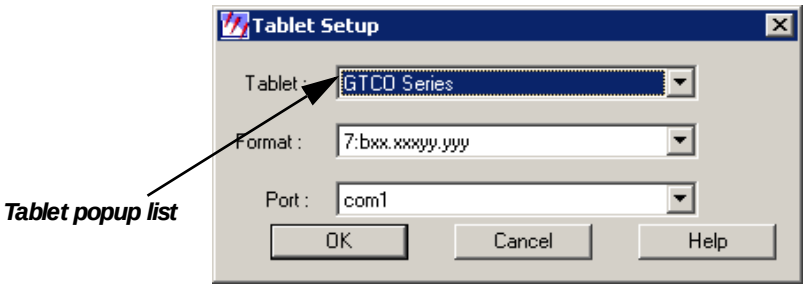
9. Close the HyperTerminal.

Configuring the Tablet Digitizer

From within ERDAS IMAGINE, you are prompted to specify the type of tablet digitizer, the data format and the port name that you want to access for output. After you complete this setup, the tablet digitizer is operational with ERDAS IMAGINE for use with various applications which can use the tablet, such as vector editing, the GCP editor, etc. Following is an example of connecting to a tablet from an ERDAS IMAGINE application.

1. With a Viewer open and an image displayed, select **File | New | AOI**.
2. Select **AOI | Tablet Input | New Configuration**.

   The Tablet Setup dialog opens:



3. In the Tablet Setup dialog, select the name of the digitizing tablet from the **Tablet** popup list.
4. Select the tablet digitizer format from the **Format** popup list. This is the format number from the tables in the section "Switch Settings and Formats".
5. Select the serial port to which the tablet digitizer is connected from the **Port** popup list.
6. Click the **OK** button.

For further help, see the ERDAS IMAGINE On-Line Help for more information on setting up the tablet digitizer within ERDAS IMAGINE.

Chapter 7

Configure Tape Drive

Description

This section explains how to set up a tape drive so that it can be accessed by Leica Geosystems software programs and utilities.

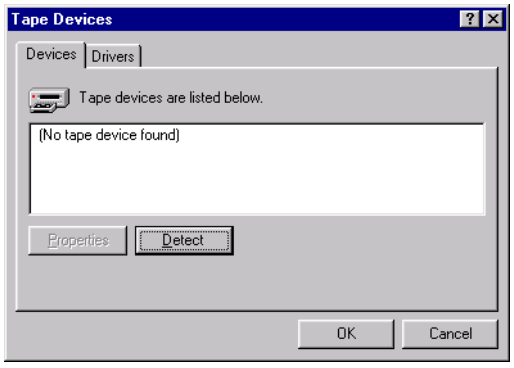
You must have full Administrator privileges to configure peripherals on a Windows operating system.

Local Tape Drive

Use these instructions to configure a tape drive on a local machine with a Windows NT 4.0, a Windows 2000, or a Windows XP Professional operating system. The tape drive and SCSI adaptor should already be installed on your local machine.

1. From the **Start** button on the Microsoft task bar, select **Settings | Control Panel**.
2. From the **Control Panel**, select the Tape Devices icon by double-clicking on it.

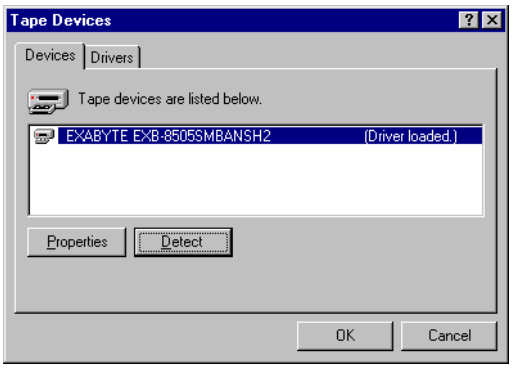
   The Tape Devices dialog opens, stating that a tape device is not found.



3. In the **Devices** tab of the Tape Devices dialog, click the **Detect** button.s

   A status bar displays as the system scans for tape devices.

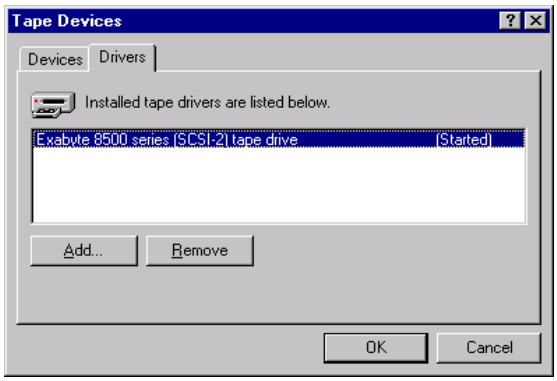
Once the tape device is located, it is listed in the window of the **Devices** tab as shown below.



4. Click the **Properties** button to confirm that both the **Device Status** and **SCSI Adapter Information** are correct, then click **OK** in the Properties dialog.

5. Click the **Drivers** tab.

   A status bar opens briefly as the system creates a list of installed drivers. The **Drivers** tab of the Tape Devices dialog should now look similar to the one pictured below:



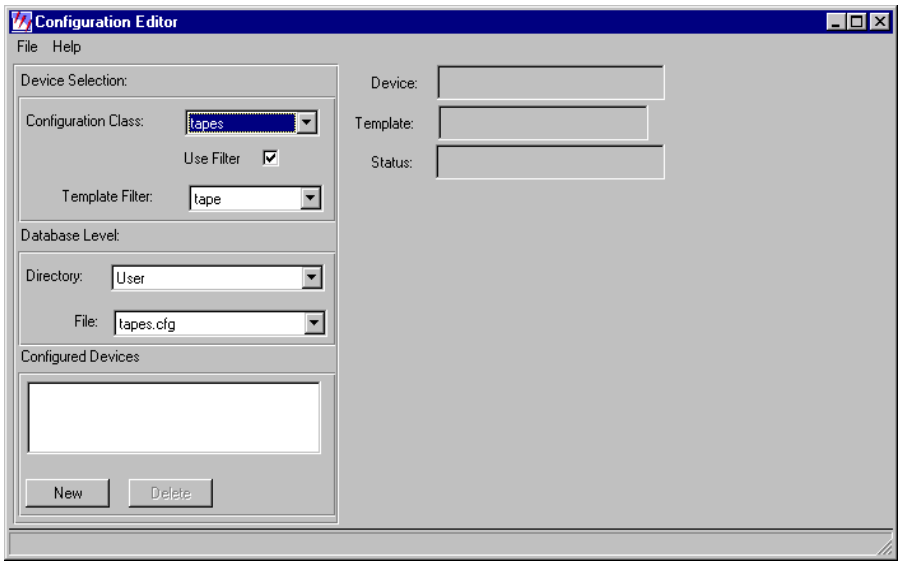
6. Click **OK** in the Tape Devices dialog. The Tape Devices dialog closes.

For help with installing, detecting, and viewing information about a tape device, see Windows on-line help.

Configuring a Remote Tape Drive

You must use the Configuration Editor to define a remote tape drive for Leica Geosystems software.

1. Select **Session | Configuration** in the menu bar. The Configuration Editor opens:



2. From the **Configuration Class** popup list, select **tapes**.

3. Click the **Directory** popup list and select one of the following options:

   Global = <SOFTWARE_HOME>/etc
   The setup and preferences for the current device are accessible by all Leica Geosystems software users working from the same Leica Geosystems software installation. You cannot save to the global environment unless you are the Administrator who installed the Leica Geosystems software.

   When you have the Global directory option selected for a configuration class, only the global configuration information is accessible from the rest of the software user interface for this configuration class. This allows an Administrator to test only the global changes and it prevents the Administrator's User preferences from inadvertently being saved to the global database.

   User = <HOMEPATH>/.<SOFTWAREVERSION>
   The setup and preferences for the current device are accessible only by you (whenever you are logged into the same account). Your User preference changes to a globally configured device that takes precedence over the Global preference settings for your sessions.

   NOTE: The changes you make in the Configuration Editor take effect immediately in the current session. They are also retained for the current session even if they have not been saved. This allows Global changes to be tested in the current session without affecting users sharing the same installation.

   If all of your User preferences do not appear to be reflected in the user interface, verify that the* User *option is selected in the* Directory *popup list for the appropriate Configuration Class(es) in the Configuration Editor.

The **File** window shows you the file name to be used when you save the setup and preferences for the current configuration class. The default is **tapes.cfg**.

4. Click the **New** button to add a new tape drive using the tape template filter. The Create new device dialog opens.

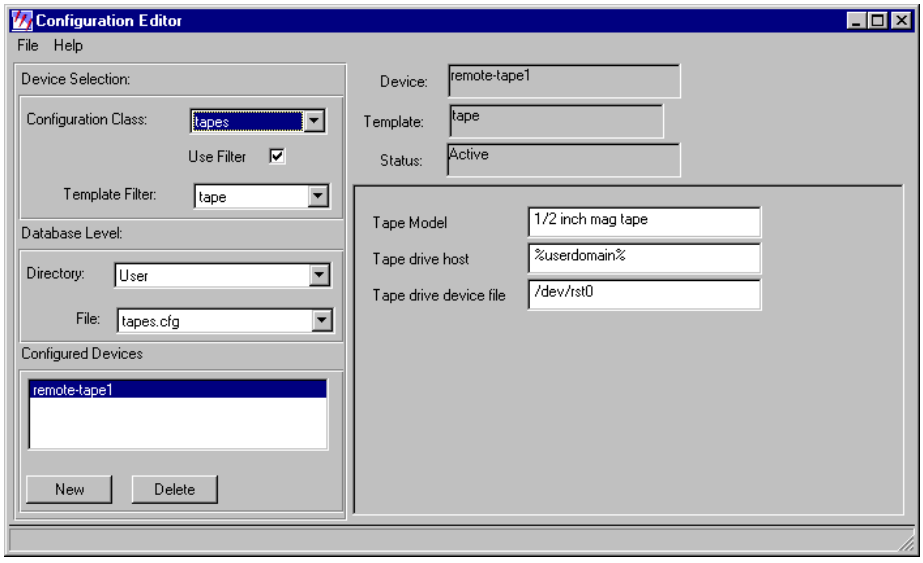
5. In the **Name** text box of the Create new device dialog, enter a name for the device. This is the name that appears in the ERDAS IMAGINE dialogs as an I/O device option. After you enter the name, press the Return key for the name to be accepted, then click **OK**.

6. Click in the **Tape Model** text box and enter the model name of the tape drive you wish to add. This is for your information only.

7. Click in the **Tape drive host** text box and enter the hostname of the workstation to which the tape drive is actually attached.

8. Click in the **Tape drive device file** text box and enter the tape drive number you wish to add.

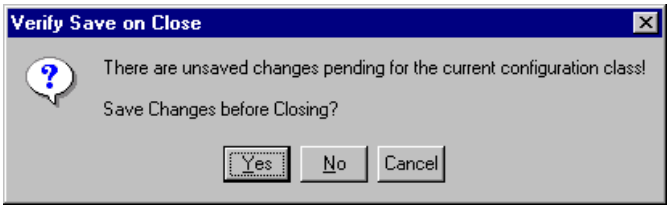
   Enter the tape drive device file for that tape device. For example, you might enter **/dev/rst0** for a QIC/150 tape drive connected to a Sun workstation.



If the host to which the tape device is attached is running Sun OS version 5.6 (Solaris7 or Soalris8) or greater, the tape drive device file must include the "b" flag, indicating that BSD compatibility is desired (e.g. **/dev/rmt/0b***).*

9. When you have finished filling in the information, select **File | Close.**

The following message displays:



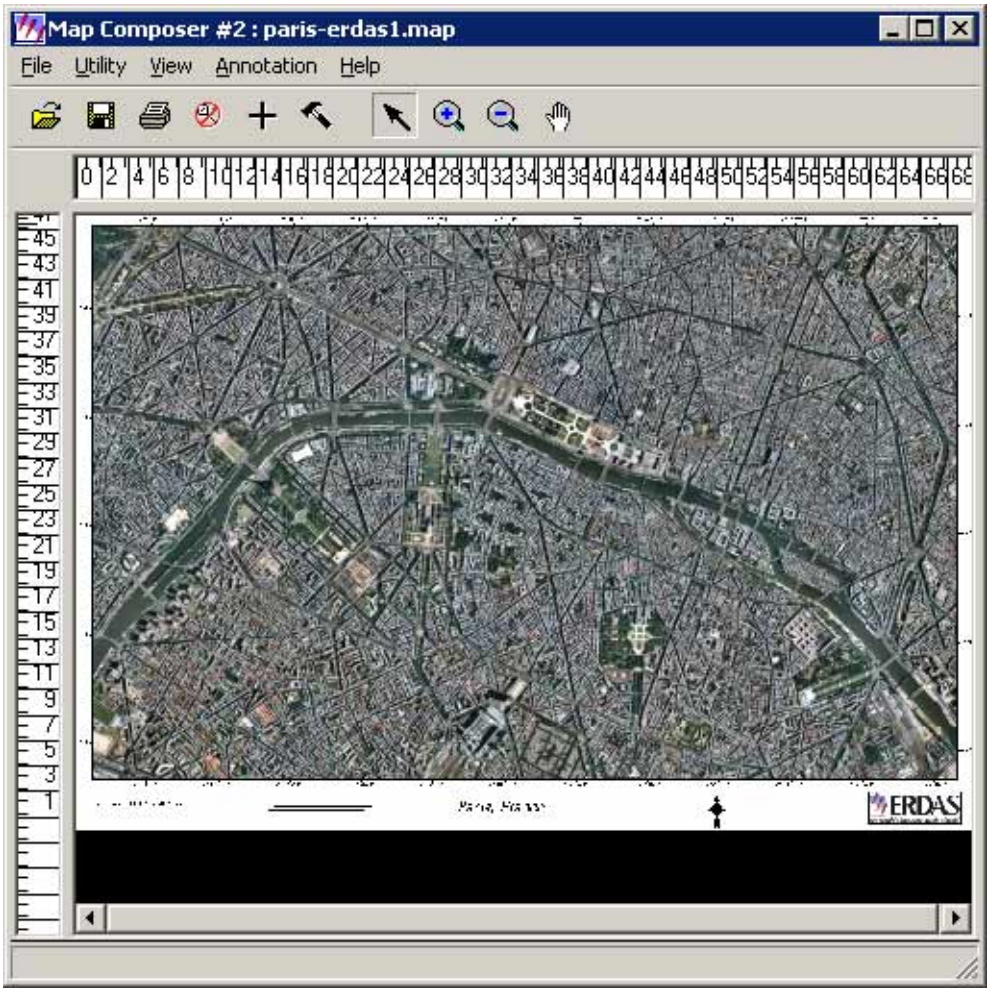
10. To save your changes to the Configuration Editor, click **Yes**.

Chapter 8

Windows Printing

Introduction

This chapter provides information about how to set up your map composition for printing.



The above map composition is used in the following example. The map composition measures 48” × 68”.

NOTE: This map composition is not included in the <IMAGINE_HOME>/examples directory.

This document is based on the premise that the printing to be done can be executed on an HP plotter using an HPRTL print driver on Windows NT 4.0, Windows 2000, or Windows XP Professional.

Troubleshooting

Sometimes when you are trying to print a map, system resources are consumed by the printing process, and the attempt to plot fails. There are several ways in which a printing failure might manifest itself. Depending on the type of print device being used, the indications of failure vary. The most common, of course, is that you do not successfully print the desired map. The symptoms of failure shown below are common for HP 600 to 3500 plotters. This includes the 1055 series.

Out of Memory/Data Lost

This is a printer panel message that is displayed when the printing application overwhelms the printer memory with data. This commonly occurs when postscript print drivers are used to attempt a print job that sends more data to the print device than the print device has memory to handle.

In ERDAS IMAGINE V8.6, this situation can also occur if you do not choose to **Rasterize before printing**. In the case where the you do not choose to **Rasterize before printing**, the map composition should be processed using the **In computer** memory option. Commonly, when the system runs out of memory, the composition is partially printed. It is not unusual that whole elements of the map composition might be missing.

Nothing Prints

In another example, you send your map composition to print, and the process initiates successfully. However, as soon as the print job switches from spooling to printing, the job is deleted from the queue. There are no results to speak of. The only potential error message is from the NT OS: Your system is running low on virtual memory. Please close some applications. This is dependent on your system's virtual memory settings.

It is advisable that you increase the default NT virtual memory settings. On Microsoft NT systems, there are initial and maximum size settings for the virtual memory that are made available to applications. The default minimum memory is acceptable, but the overall may need to be increased.

Changing Memory Settings

Increasing overall memory can be accomplished by:

- increasing the maximum on the existing paging file.
- creating an additional paging file (if there is not sufficient free disk space on the drive or partition where the other paging has been created).

It is also common that, when the Commit Charge value on the Windows NT Task Manager exceeds ~ 1 GB, nothing prints. Eventually, this occurs when processing without **Rasterize before printing** and **In computer** memory.

Preferences

Strip Height

The Strip Height is set to 64 by default. This is an acceptable strip height. This is the height of each strip of data that is sent to the plotter.

Printing Data Transfer Compression

Printing Scale Factor is the scaling factor at which the output data is created. This scale applies to the output frame size. For example:

none = 1x

low = 2x

medium = 4x

high = 8x

For example, if the image that is being put into a frame is 5000 × 6000 pixels, and the frame in which the image data is going to be printed is 17”× 20”, and you are plotting at 600 dpi, then there are 5000 pixels with which to fill 10200 dots.

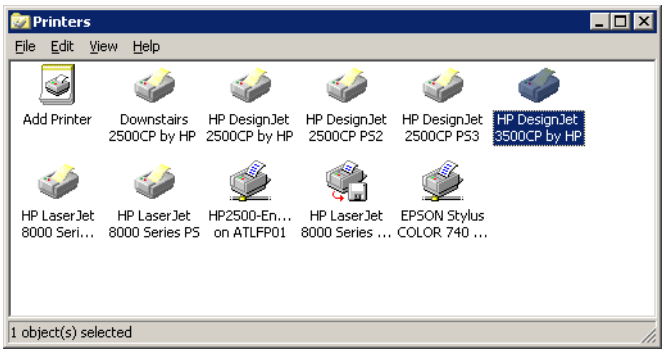
Scaling is always constrained to the smaller of the dimensions to maintain geometric fidelity. In the example above, a scaling factor of 2 would be appropriate. If a scaling factor of one were used, ERDAS IMAGINE would create a file big enough to fill the output map frame. This is, in essence, quadrupling the size of the raster data needed to be sent to the plotter.

Moreover, a scale factor of two is a good trade-off in that little annotation degradation occurs. If the Printing Scale Factor is too high, text annotation can become pixelated.

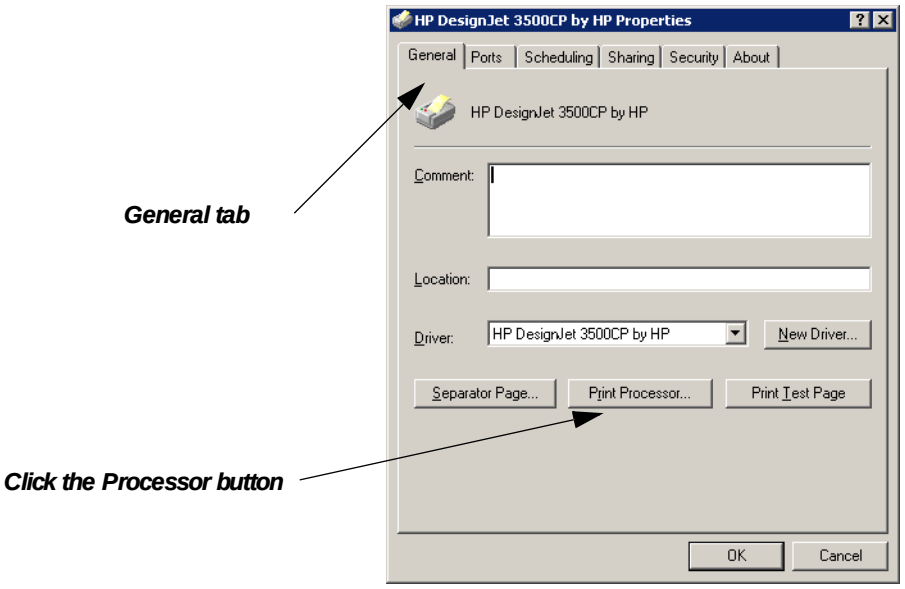
Spool RAW Data

In order to print successfully in ERDAS IMAGINE, data must be spooled to the printer as the RAW datatype. These steps show you how to set your printer driver to always spool the RAW datatype.

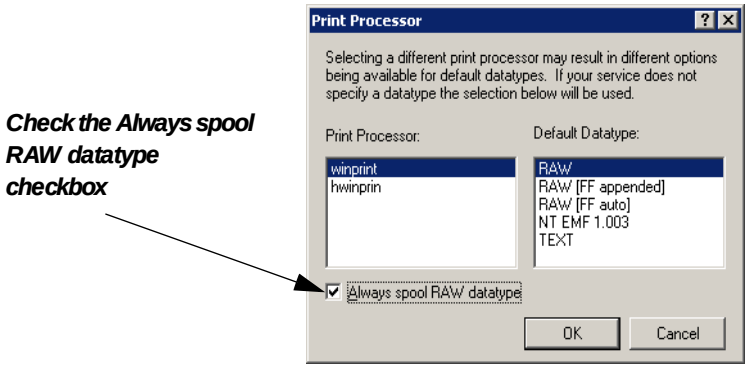
1. From the Windows **Start** button, click **Settings | Printers** to display the Windows Printers dialog:



2. Right-click on the icon for the desired printer, and click **Properties** to display the Printer Properties dialog:



3. From the **General** tab, click on the **Print Processor** button to open the Print Processor dialog:



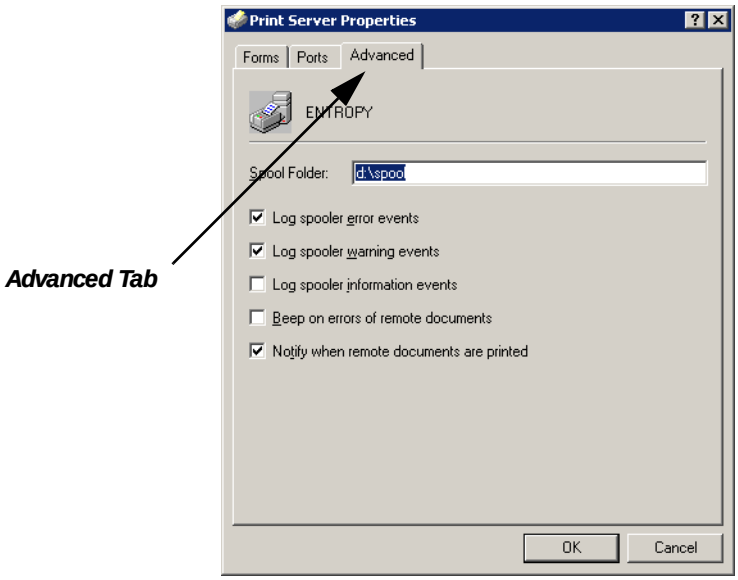
4. Check the **Always spool RAW datatype** checkbox.

Changing the Location of the Spool Folder

In Windows NT, the default spool folder is in C:\WINNT\System32\spool\PRINTERS. This is only applicable if Windows NT is installed on drive C. It is common that the drive on which Windows NT is installed may not have sufficient free disk space for spooling large print jobs. In order to successfully print large print jobs, it is sometimes necessary to change the location of the spool folder. This can be accomplished as follows:

1. From the Windows **Start** button, click **Settings | Printers** to display the Windows Printers dialog.

2. Select **File | Server Properties** from the Printers dialog. The Print Server Properties dialog opens. Click on the **Advanced** tab:



3. In the Spool Folder field, change the path of the spool folder to a folder on a drive that has adequate free disk space, such as: C:\WINNT\System32\spool\PRINTERS.

Scenarios

You may encounter the following scenarios when printing:

No Pre-Rasterize

These steps work for a moderate size map composition (e.g., 24” × 36” at 600 dpi). The no pre-rasterize scenario does not create a temporary file: all processing is handled in memory. This scenario can lead to the situation where nothing prints when the limits of system memory are exceeded. (There appears to be a 1 GB limit in Windows NT 4.0.) Any time the Commit Charge exceeds 1 GB, the print job is removed from the queue.

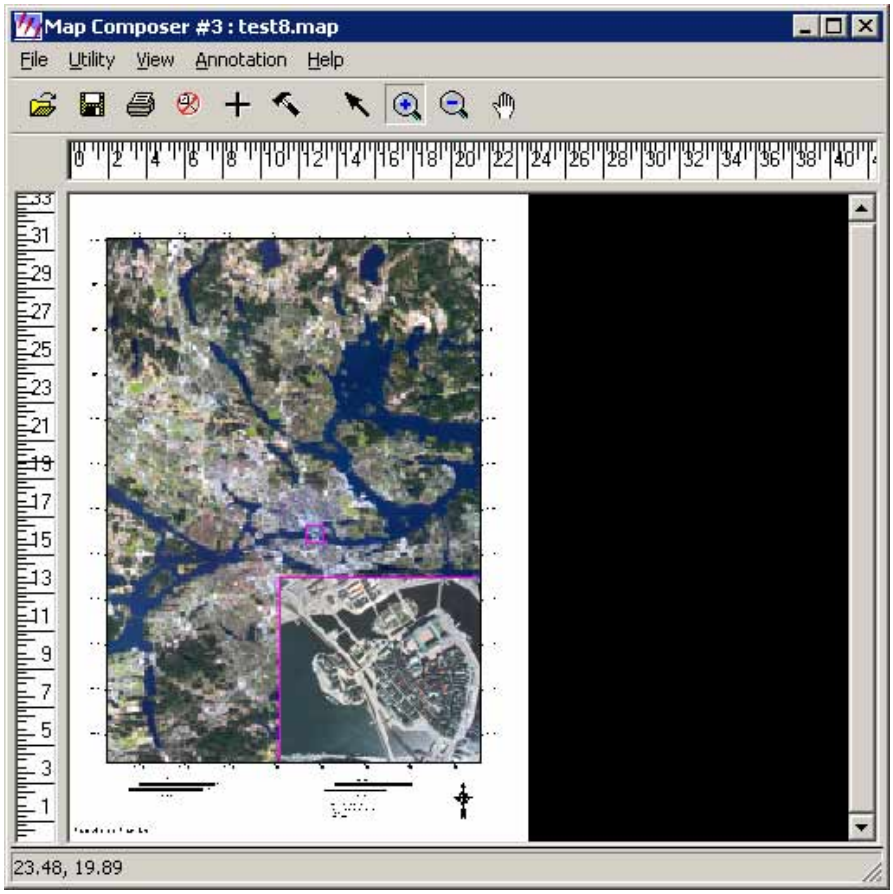
Preparation

ERDAS IMAGINE must be running.

You must have a map composition displayed.

NOTE: The map composition displayed in this scenario is not supplied with the examples data.

The following picture shows a Map Composition ready to print:



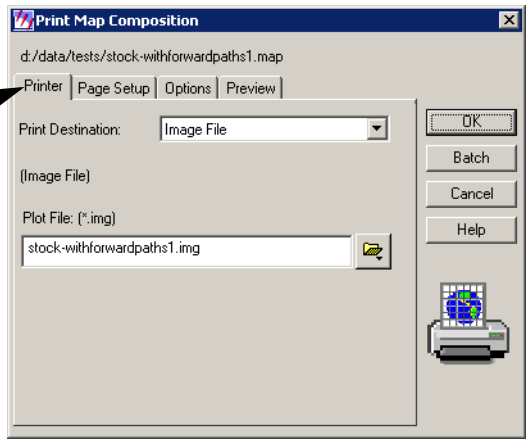
Open the Map Composition Dialog

1. In the Map Composer dialog, click the Print icon.

This brings up the Print Map Composition dialog. The Print Map Composition dialog opens on the **Printer** tab. In this tab, you can select a printer you have configured.

For information about how to configure a printer, see the most recent ERDAS IMAGINE Installation Guide.

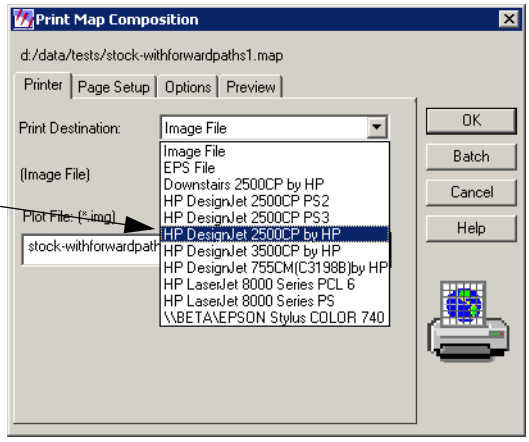
The Printer tab allows you to select a configured printer that can print the map composition



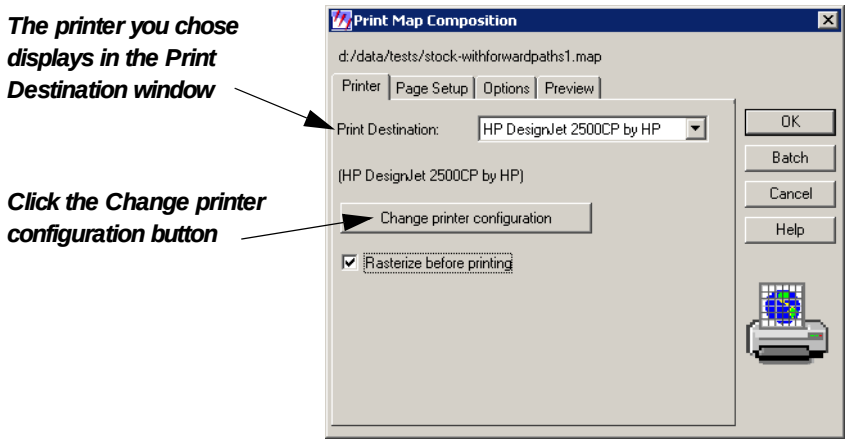
2. Click the **Print Destination** dropdown list and choose an appropriate printer.

NOTE: If you do not have any printers configured on your computer, then the only options that appear are Image File and EPS File.

In this example, the HP DesignJet 2500CP by HP printer is chosen as the Print Destination

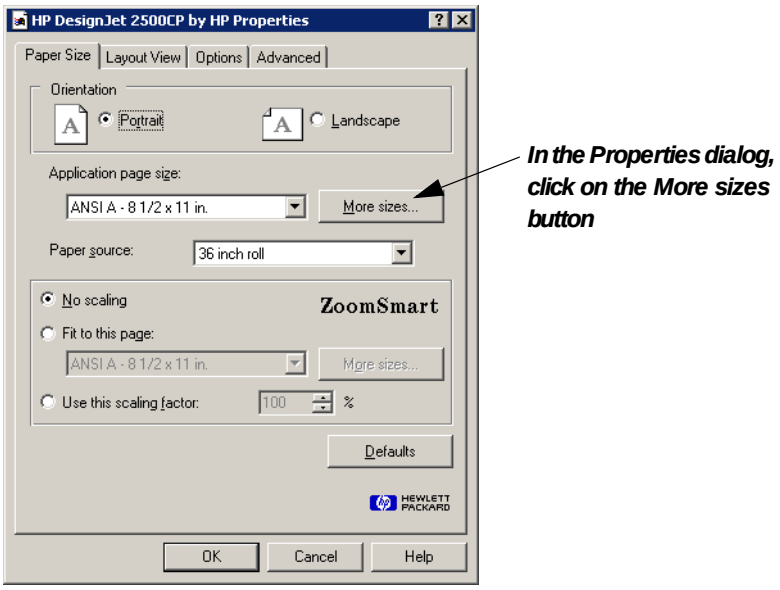


The **Print Destination** you select displays in the Print Map Composition dialog. Now, you can set configuration parameters.



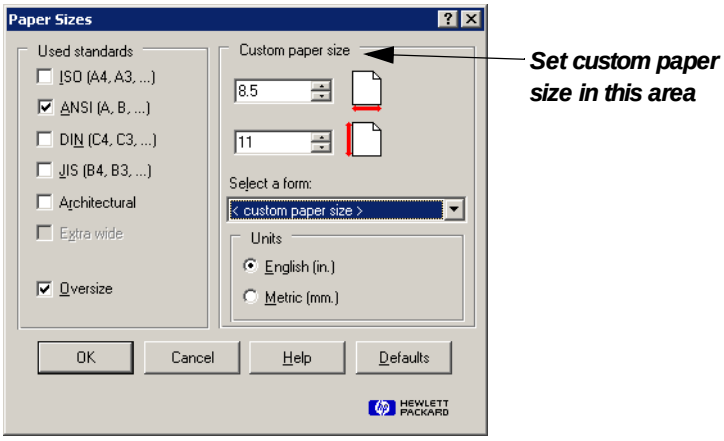
3. Click on the **Change printer configuration** button.

   The Properties dialog for the printer you select displays. In this case, the title of the dialog is HP DesignJet 2500CP by HP.



4. Click on the **More sizes** button.

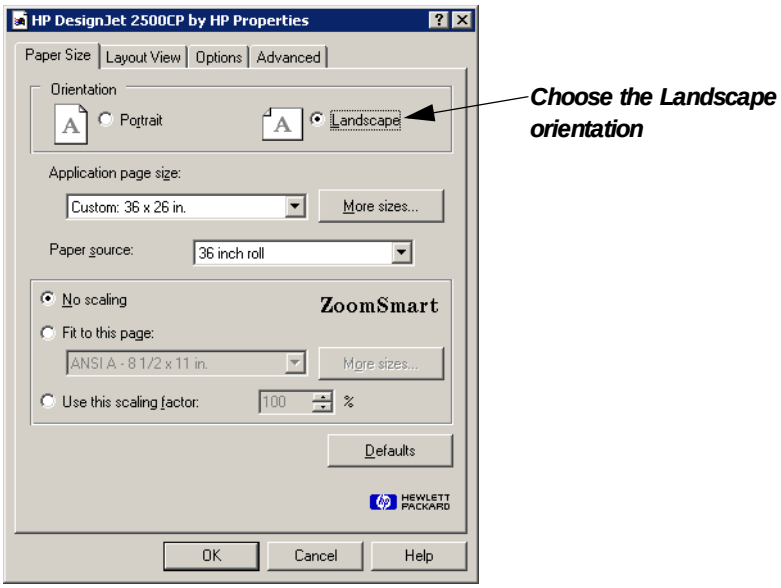
   The Paper Sizes dialog opens. In this dialog, you can set the paper size required for your particular map composition.



5. Click in the **Custom paper size** section of the Paper Sizes dialog and type the size of the paper. In this case, the appropriate size is **36**" × **26**".

6. Click **OK** in the Paper Sizes dialog.

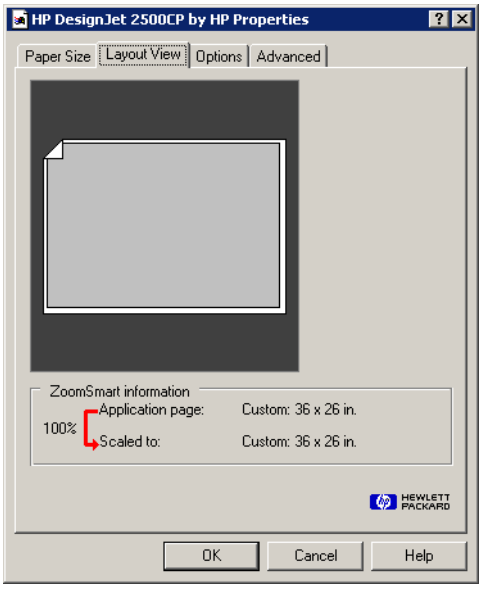
   You are returned to the **Paper Size** tab of the Properties dialog.



7. In the **Paper Size** tab of the Properties dialog, click the **Landscape** orientation radio button. This option conserves paper.

8. Click the **Layout View** tab in the Properties dialog.

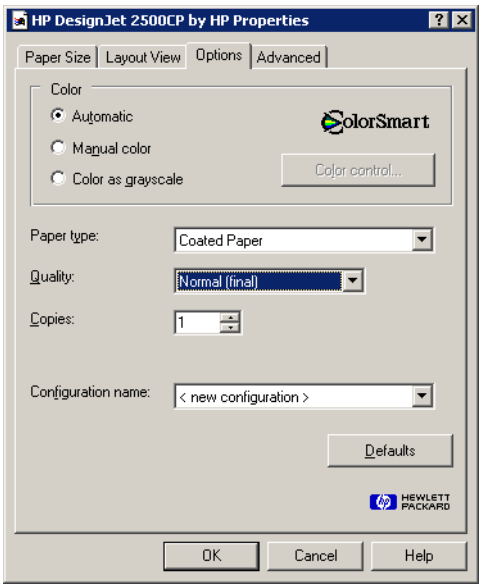
   The **Layout View** information displays.



The **Layout View** tab shows that the width is **36**", and the height is **26**". The **36**" dimension runs across the **36**" width of the roll of paper.

9. Click the **Options** tab in the Properties dialog.

The options display. In this tab you make color and paper selections.



10. In the **Options** tab, click the checkbox for **Manual color**.

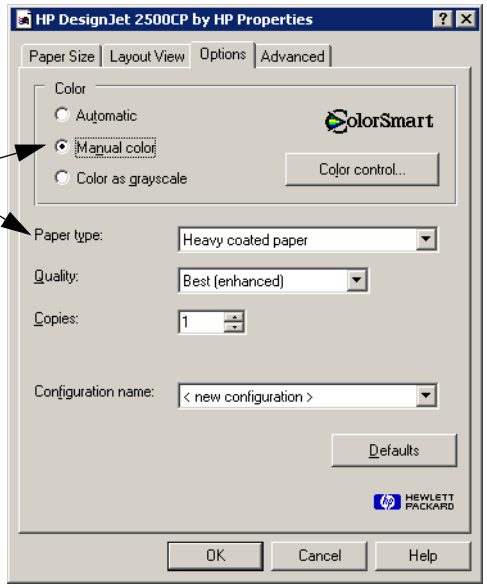
You are going to come back to the **Color control** setting in a moment.

11. Click the **Paper type** dropdown list, and select the type of paper.

The **Quality** setting controls the dots per inch (dpi) that is used to plot the map. There are different quality designations used by different printer drivers. Some common HP quality designations are:

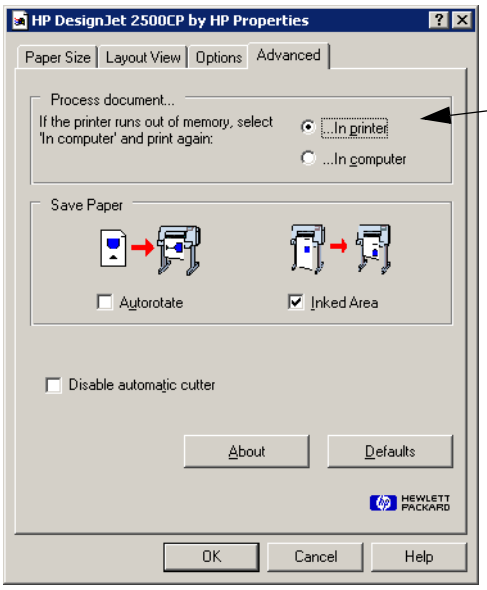
- Fast (draft) (300 dpi)
- Normal (final) (300 dpi)
- Best (enhanced) (600 dpi)
- Economy (300 dpi)
- Productivity (300 dpi)
- Photo (600 dpi)

So far, you have selected the Manual color radio button as well as the Paper type



12. Click on the **Advanced** tab in the Properties dialog.

The advanced options display in the Properties dialog.



Select the process document setting in this area

13. In the **Process document** section of the **Advanced** tab, click the **In computer** radio button.

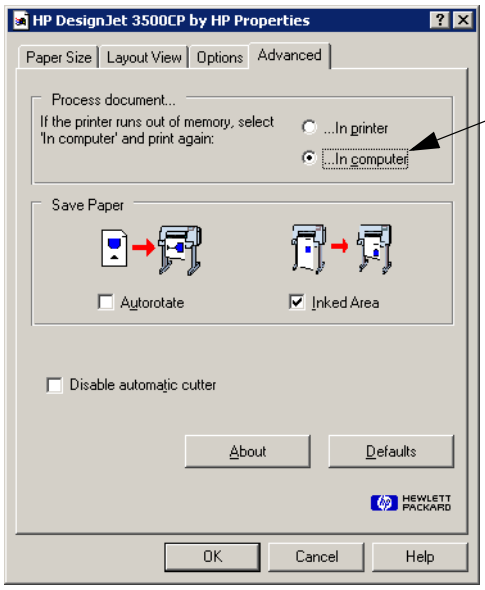
    You need to select the **In computer** option in order to successfully print the color calibration pages which follow.

    A Hint dialog opens that warns of slower printing. You are going to process the document in the computer memory when you do not pre-rasterize anyway.

14. Click **OK** in the Hint dialog.

15. Click the **Inked Area** checkbox.

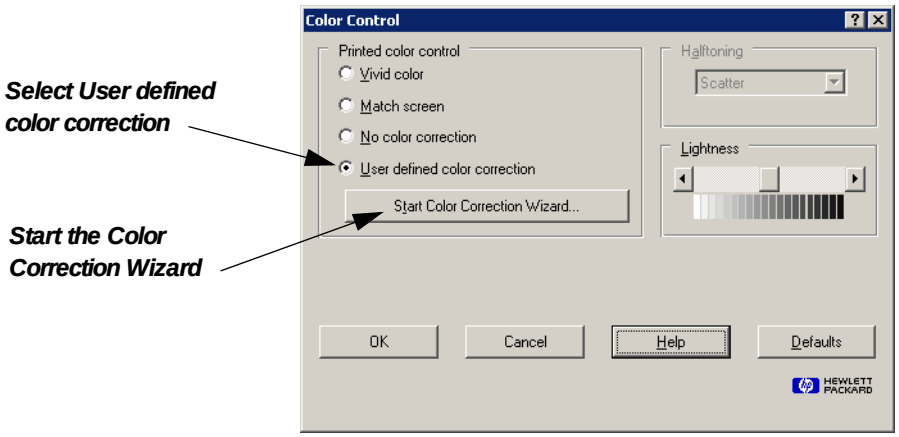
    Your **Advanced** tab should now look like the following:



Color control

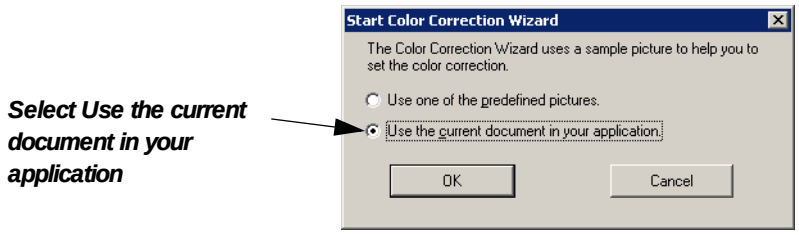
1. Click the **Options** tab in the Properties dialog.
2. Click on the **Color control** button in the **Options** tab.

   The Color Control dialog opens.



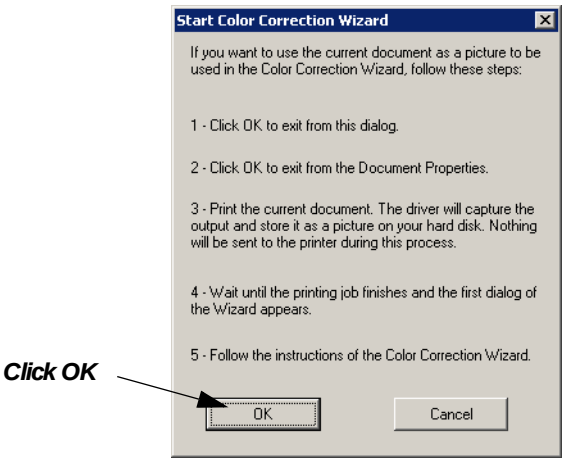
3. In the **Printed color control** section of the Color Control dialog, click on the **User defined color correction** radio button.
4. Click on the **Start Color Correction Wizard** button.

   The Start Color Correction Wizard dialog opens.



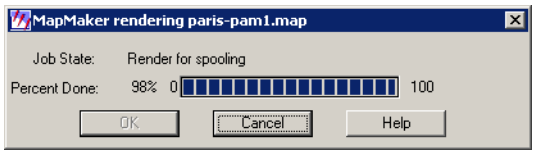
5. Click the **Use the current document in your application** radio button.

   The next Start Color Correction Wizard dialog opens. It provides information about using the current document as the basis for the Color Correction Wizard.



6. Click **OK** in the Start Color Correction Wizard dialog.

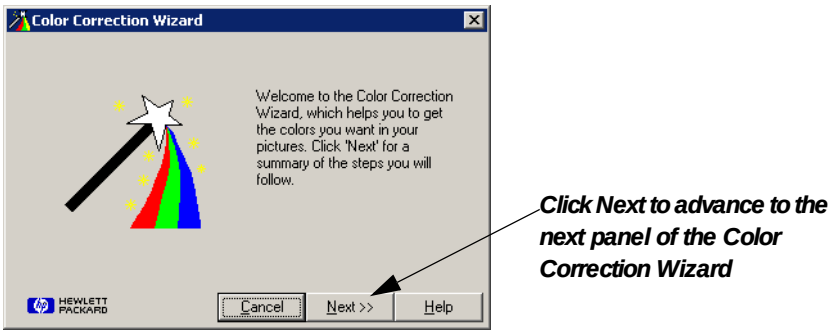
   A Job Status dialog opens to show the progress of the document capture.



7. Click **OK** in the Color Control dialog and the Map Composition dialog.

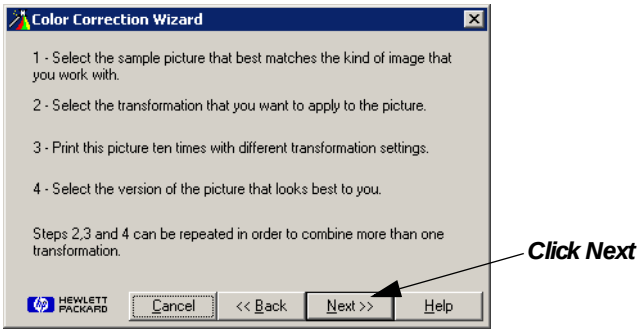
8. Depending on your preference settings, you may need to click **OK** in the Job Status dialog to close it.

   The Color Correction Wizard welcome dialog opens.

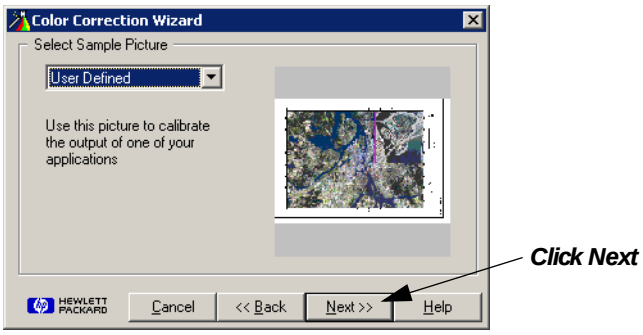


9. Click **Next** in the Color Correction Wizard dialog.

The next Color Correction Wizard dialog suggests a series of steps.

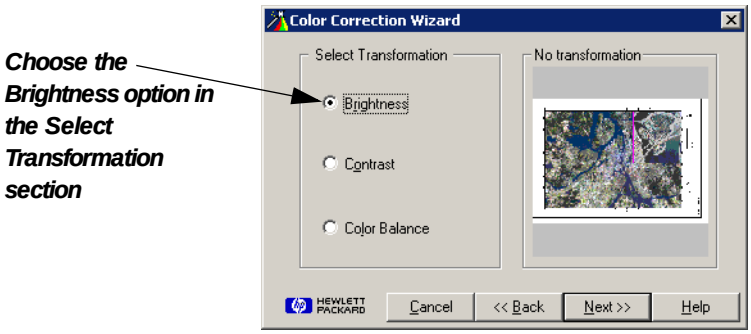


10. Click **Next** in the Color Correction Wizard dialog.

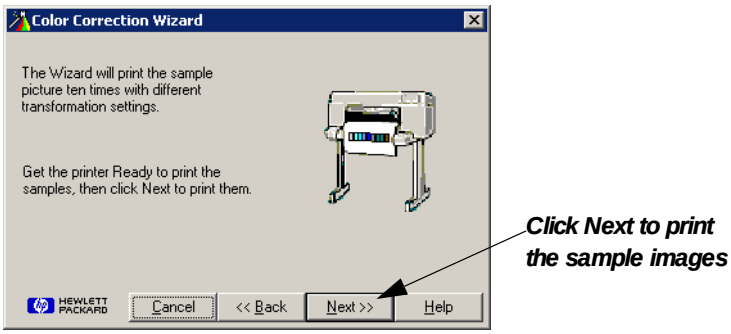


11. Click **Next** when the No transformation message is displayed above the document preview.

The Brightness is adjusted in this step.



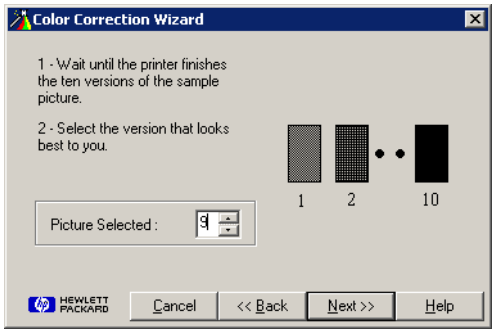
The next dialog advises you to prepare the printer. Next, the sample pictures are going to be printed.



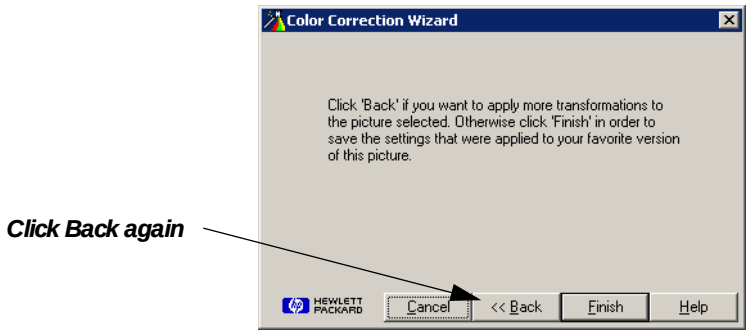
12. Click **Next** to print the sample images.

13. Once you get the sample images from the printer, compare the sample image printout to the map on your screen.

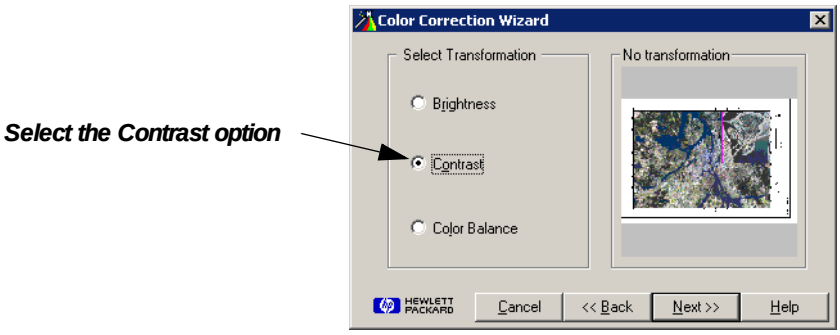
14. In the **Picture Selected** section, type the number of the image that best represents the brightness of the map. In this example, **9** is the best.



15. Click **Back** twice to define the contrast setting.



The Color Correction Wizard dialog that follows allows you to set Contrast:

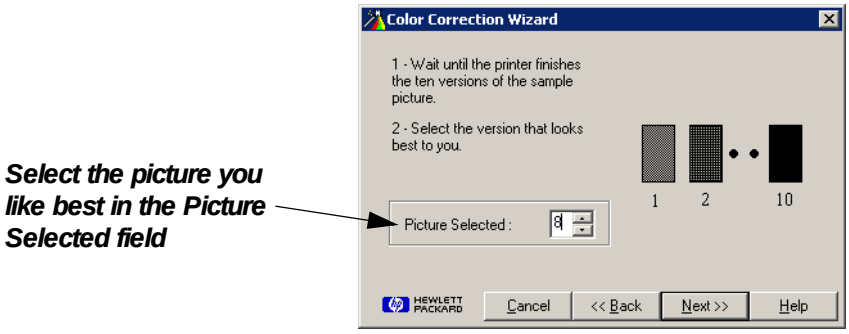


16. Click on the **Contrast** radio button.

17. Click **Next** when the No transformation message is displayed above the document preview.

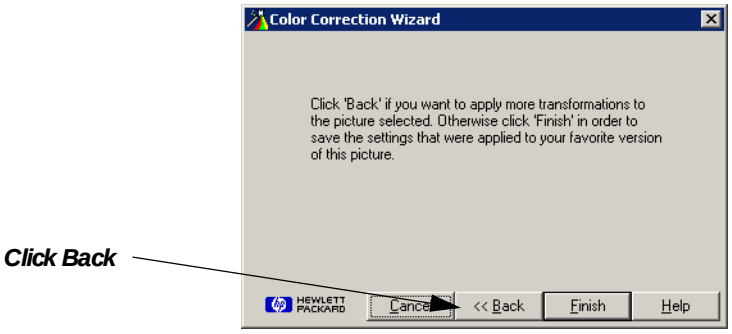
18. Click **Next** to print the sample images.

19. In the **Picture Selected** section, type the number of the image that best represents the brightness of the map. In this case, **8** is best.

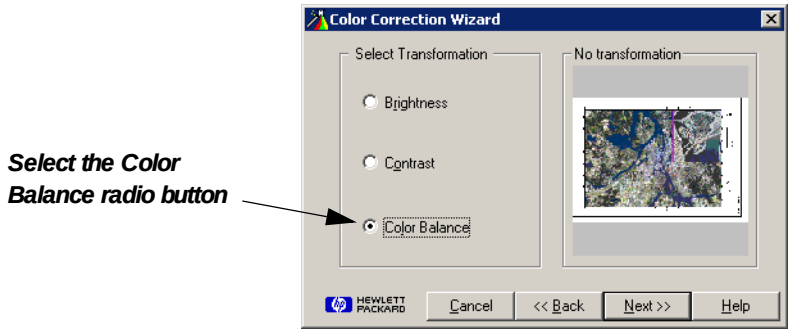


20. Click **Back** twice to define the **Color Balance** setting.

21. Click **Back** again.



Now, you can select the Color Balance option.

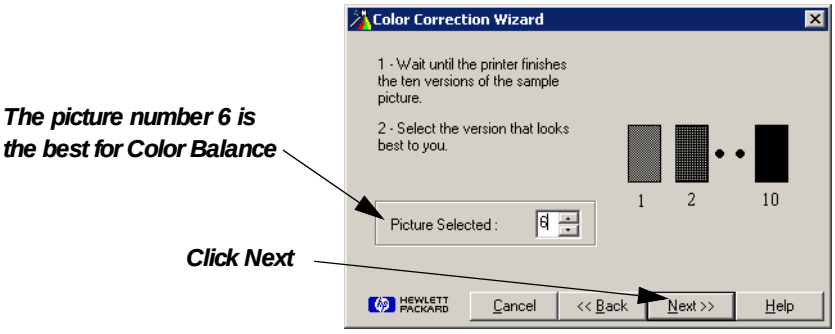


22. Click on the **Color Balance** radio button.

23. Click **Next** when the No transformation message is displayed above the document preview.

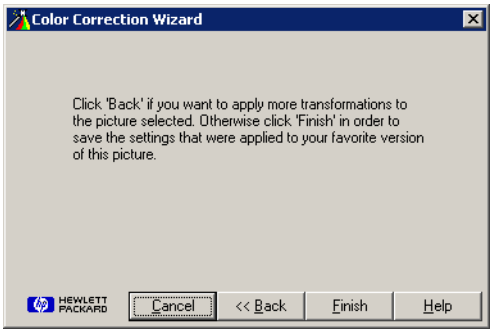
24. Click **Next** to print the sample images.

25. In the **Picture Selected** section, type the number of the image that best represents the brightness of the map. In this case, **6** is best.



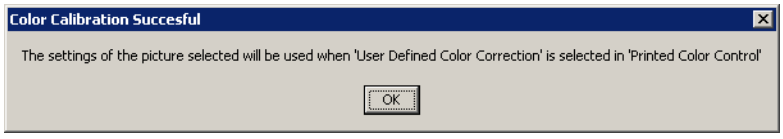
26. Click **Next** in the Color Correction Wizard dialog.

    Now, you have defined all three elements of the Color Correction Wizard: **Brightness**, **Contrast**, and **Color Balance**.



27. Click on **Finish** in the Color Correction Wizard.

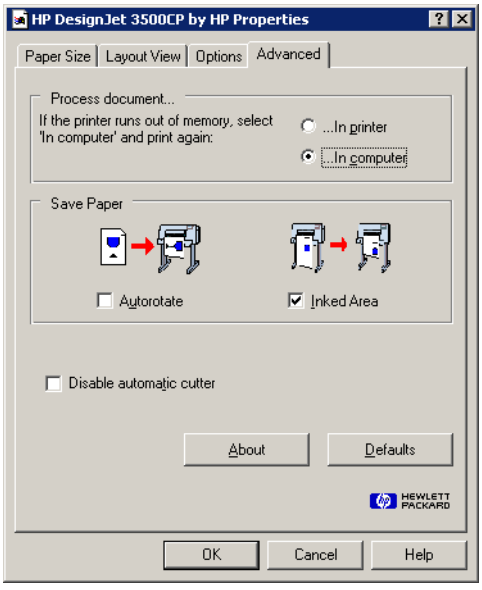
A dialog opens advising you that the color calibration was a success.



28. Click on **OK** in the Color Calibration Successful dialog.

You are returned to the Properties dialog. If you have the **User Defined Color Correction** selected, it uses your color calibration.

29. Click the **Advanced** tab in the Properties dialog.

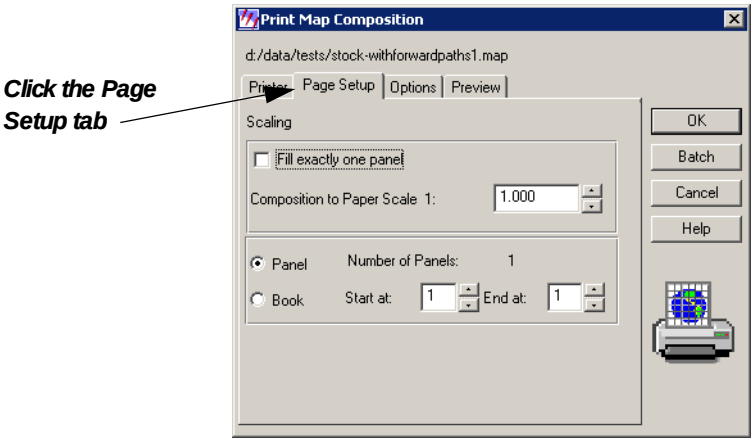


30. Click **OK** in the Properties dialog.

Return to the Print Map Composition Dialog

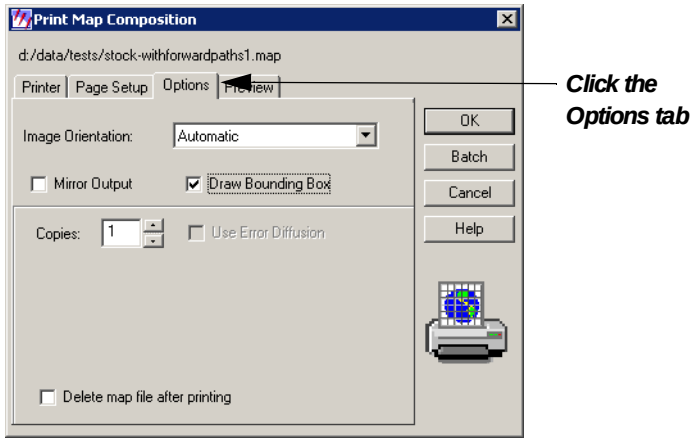
1. Click the **Page Setup** tab in the Print Map Composition dialog.

   Your Print Map Composition dialog Page Setup tab should look like this:



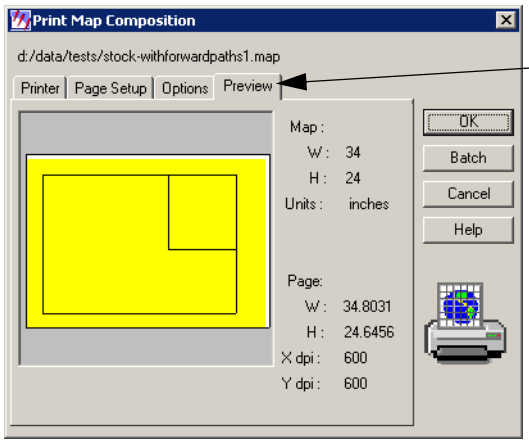
2. Click the **Options** tab of the Print Map Composition dialog.

   The **Options** tab looks like this:



3. Click the **Preview** tab of the Print Map Composition dialog.

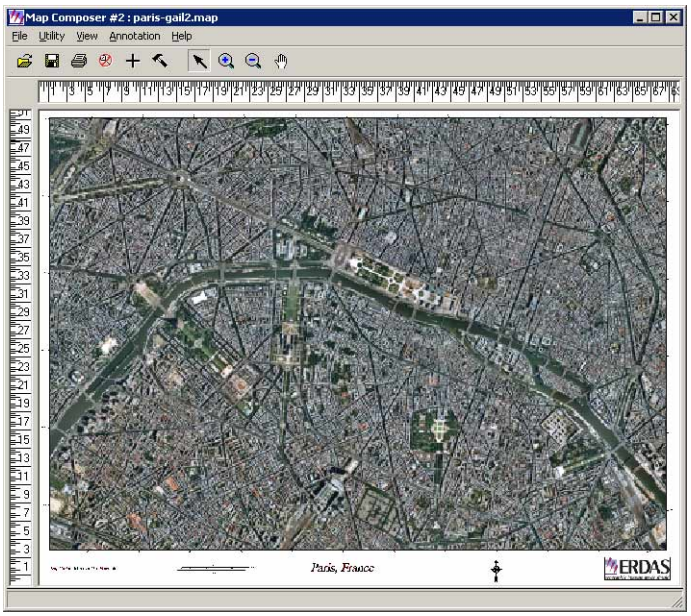
   Finally, your **Preview** tab should look like this:



4. Click **OK** to print your map.

Pre-Rasterize

Another scenario involves the **Pre-Rasterize** option. If you want to print large maps or print to higher resolution print devices, it is probably necessary to utilize the **Pre-Rasterize** option in ERDAS IMAGINE in conjunction with an HPRTL driver. There are similar languages that can be utilized with plotters sold by other printer manufacturers.



This map is large. It is 52” x 68”. It is printed at 600 dpi, and would easily exceed the system limits for successful printing. This map cannot print without pre-rasterization unless the Printer Data Transfer Compression preference is set to high. Even then, the raster data that is printed appears highly degraded as no higher than a compression factor of low or 2 can be effectively used with this data. Consequently, the **Pre-Rasterize** option is used in order to print successfully.

The 52” height of the map corresponds with the 54” width of the paper for the HP 3500. There are effectively 31200 pixels, or dots, available for plotting at 600 dpi. The image in the map frame is 37000 pixels high. This map would be best processed with the **Printer Data Transfer Compression** preference set to **none**, but that would also quadruple the amount of data that is sent to the plotter. So, you are going to use the default **Printer Data Transfer Compression** preference **low**. This generally provides acceptable results.

Preparation

ERDAS IMAGINE must be running.

You must have a map composition displayed.

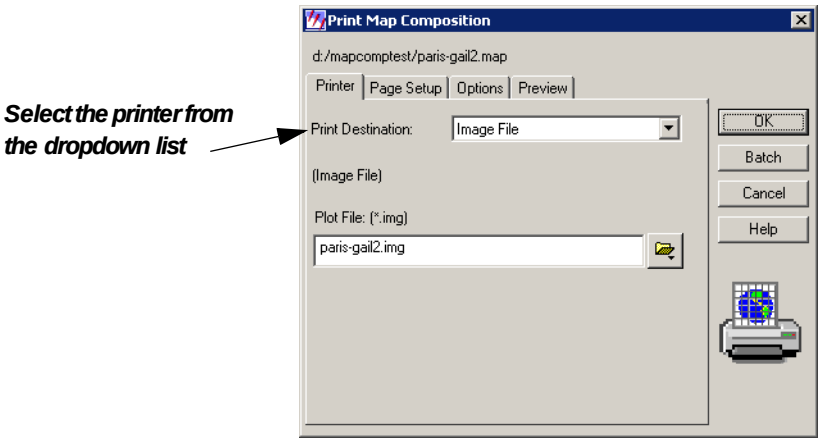
NOTE: The map composition displayed in this scenario is not supplied with the examples data.

1. In the Map Composer dialog, click the Print icon.

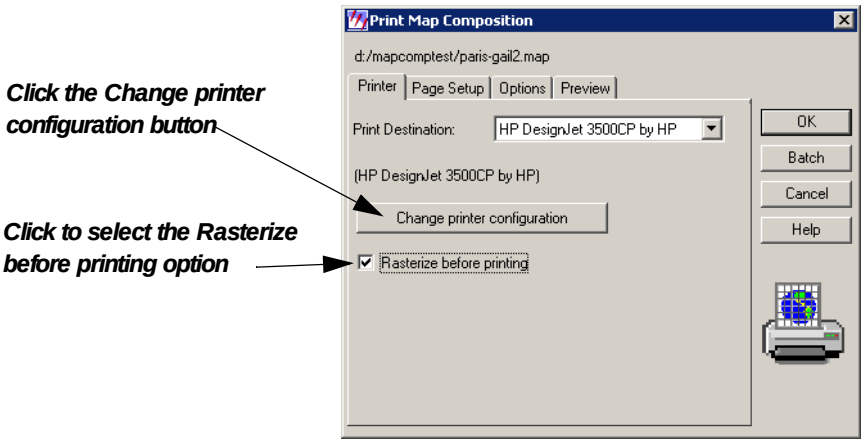
This brings up the Print Map Composition dialog. The Print Map Composition dialog opens on the **Printer** tab. In this tab, you can select a printer you have configured.

For information about how to configure a printer, see the most recent ERDAS IMAGINE Installation Guide.

2. In the Print Map Composition dialog, select the printer from the **Print Destination** dropdown list.



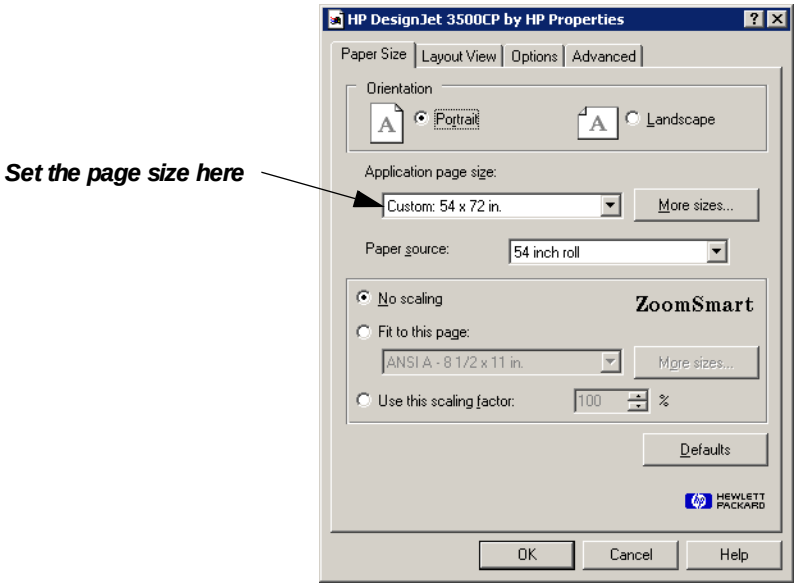
Once you choose your printer, the **Rasterize before printing** option displays.



3. Click the **Rasterize before printing** checkbox.

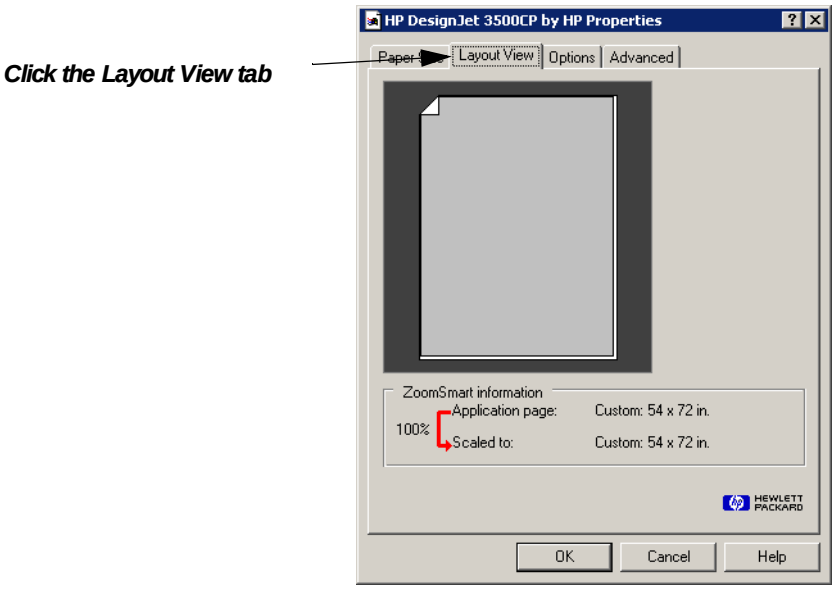
4. Click on the **Change printer configuration** button.

   The Properties dialog opens. It has the name of the printer you selected as the **Print Destination**.



5. In the **Application page size** section of the Page Size tab, set the paper size to 54” x 72”.

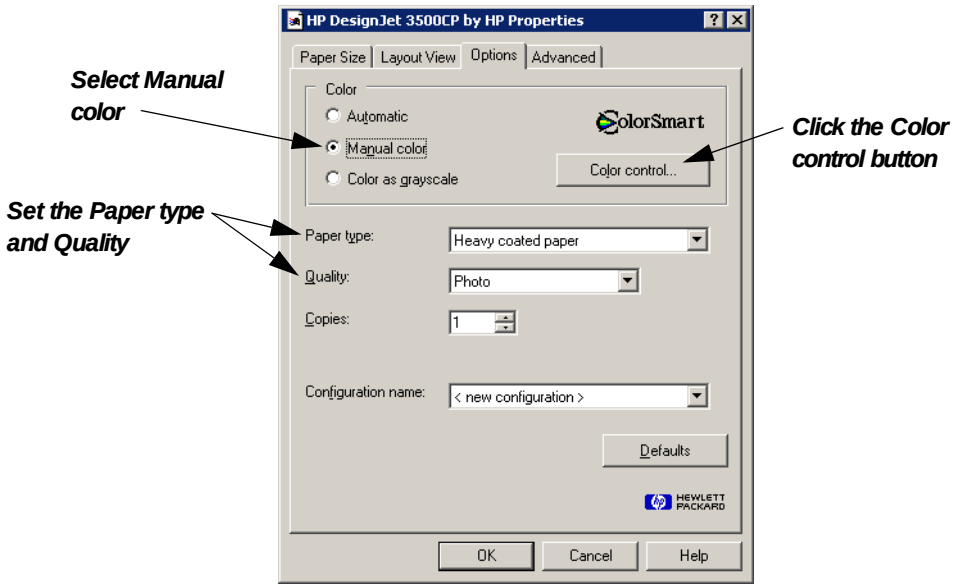
6. Click on the **Layout View** tab of the Properties dialog.



7. Look at the **Layout View** to verify the parameters.

8. Click on the **Options** tab of the Properties dialog.

   The Options display.



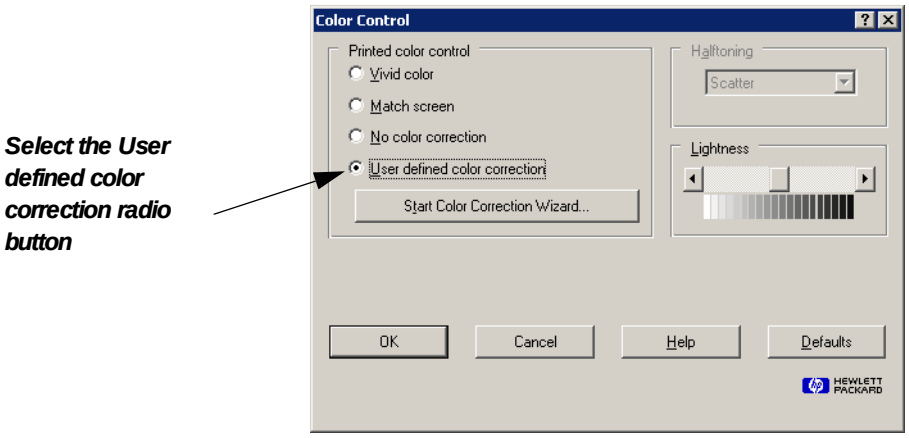
9. Set the **Paper type** and **Quality**.

   The **Quality** should be set to **Photo** or **Best**, which is 600 dpi if the highest quality is desired.

10. Click on the **Manual color** radio button in the **Options** tab.

11. Click on the **Color control** button to check the Color Control settings.

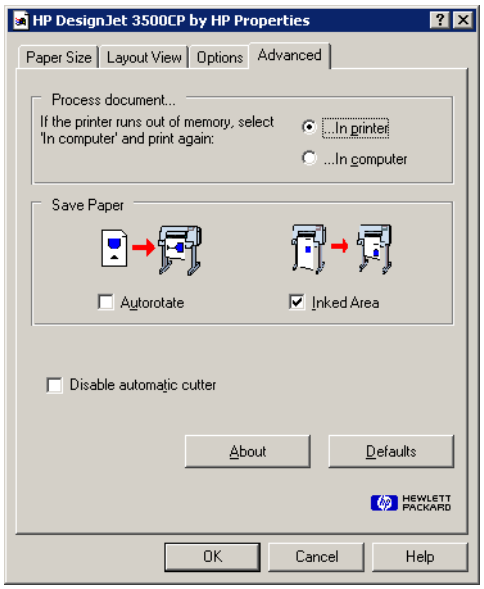
The Color Control dialog opens.



12. Set the **Printed color control** to **User defined color correction**.

This should still be set to the same values used in the previous exercise, "No Pre-Rasterize". If you did not perform the previous exercise, the procedure for setting the User defined color correction is fully described there, in "Color control".

13. Click on the **Advanced** tab.

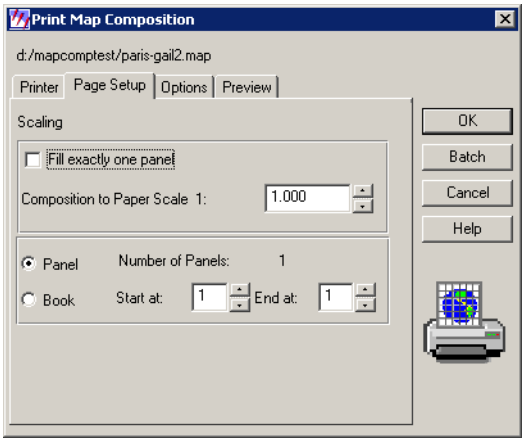


14. Click the **In Printer** radio button.

In the previous exercise, the **In Computer** radio button was set so that printing could be done using the no pre-rasterize method in ERDAS IMAGINE.

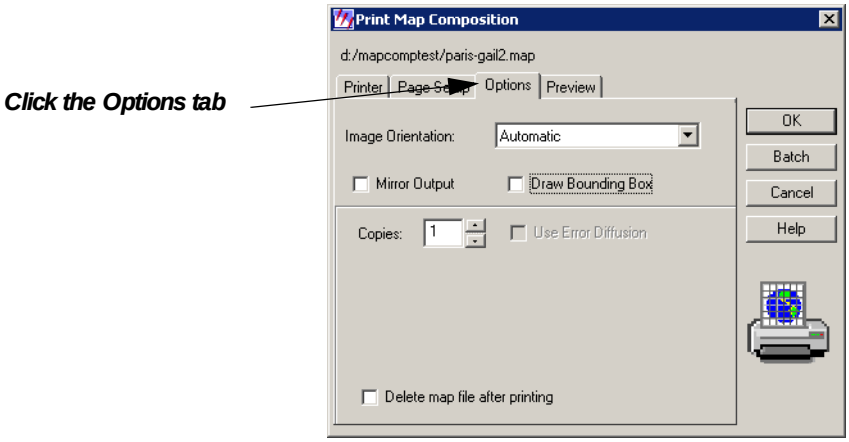
15. Click **OK** in the **Advanced** tab.

The **Page Setup** tab of the Print Map Composition dialog displays:



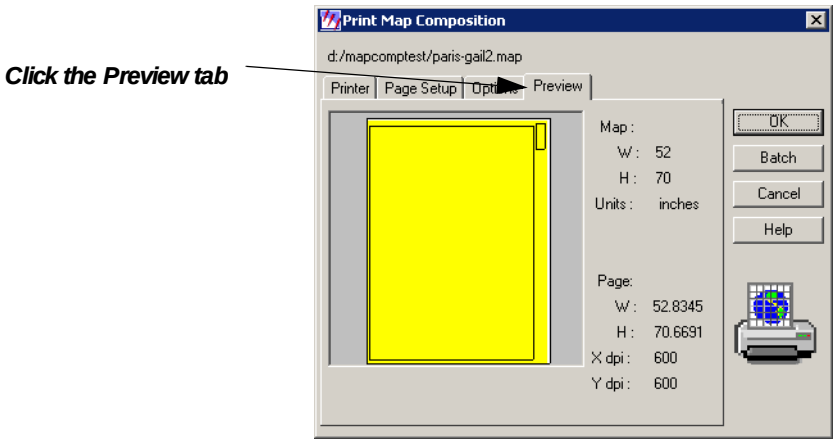
16. Verify the parameters on the **Page Setup** tab.

17. Click the **Options** tab.



18. Verify the parameters on the **Options** tab.

19. Click on the **Preview** tab.



20. Examine the Print Preview.

21. Click **OK** in the Print Map Composition dialog to print.

Chapter 9

Adding Fonts to Annotation

Introduction

This section describes how to add new fonts to ERDAS IMAGINE annotation.

Create an .fdb File

To add True Type system fonts to the ERDAS IMAGINE annotation package, you must add the new fonts to a font data base (.fdb) file in any of the directories specified in the ERDAS_FONT_PATH, which is, by default, the <IMAGINE_HOME>/etc/fonts directory where ERDAS IMAGINE is installed on your system.

You can create a new file or edit an existing file. You may use <IMAGINE_HOME>/etc/fonts/fontlist.fdb as an example, but be aware that the contents of the fields may look different for the OTL fonts that are distributed with Leica Geosystems software, and that your file should only have entries for your fonts.

If you create a new file, you can give it any name as long as it is in one of the directories mentioned above. User-defined directories may be used by adding them to the ERDAS_FONT_PATH environment variable in the Environment tab of the ERDAS IMAGINE Properties dialog. Note that a file named “a.fdb” in the current directory overrides a file named “a.fdb” in the directory from which you started ERDAS IMAGINE, which in turn overrides a file named “a.fdb” in the etc/fonts directory.

*The first line of the .fdb file must be **version 3**.*

You must have a seven-field entry in your .fdb file for every font you want the annotation package to know about. All of the name and string fields in the entry should be in quotes.

The following chart lists these fields and the information they specify.

Table 9-1: Font Fields

Field Number	Field Name	Font Information[1]
One	Font Name	Use the Font File Name below (without variations) or use another name of your choice. This is the name you see in the scrolling list of available fonts in the Text Style Chooser, plus any special weight and/or slant attributes. [2]
Two	Font File Name	This field is the Font Name as shown in Fonts Control Panel.

Table 9-1: Font Fields (Continued)

Field Number	Field Name	Font Information[1]
Three	ASCII PostScript File Name	This is a printer-downloadable file that goes with the selected font. It is the font file that is included in the EPS file that is created when you output your Map Composition to an EPS file. When you transfer the EPS file to another application (e.g., Microsoft Word) and print the document, this file is actually downloaded to your PostScript printer. If you do not specify a PostScript file in this field, you are not able to create a usable file.[3]
Four	Windows Font Name	When a font is selected, the Windows font specified here is used in the annotation text entry fields, where text is entered or displayed. If you just want the standard ERDAS IMAGINE text font to be used, use the word “default” If you want the font that you are adding to be displayed in the text entry fields, use the same name here that you used for the font file name (**Field Number Two**).
Five	Font Language Flag	This is the only field that must not be in quotes. It is the flag that indicates whether the language for which this font is used is written left-to-right or right-to-left. If the language is written left-to-right, use LEFT_TO_RIGHT for this field. If the language is written right-to-left, use RIGHT_TO_LEFT for this field.
Six	Sample String	This is the string that you want to use for the text style sample in the Text Style Chooser. For English, something like “AaBbCc” or Abc123” is commonly used, but you may wish to use some other string, particularly for other alphabets.
Seven	Font Server Name	This is the name of the font server to be used to read the font. Use “MSW” for this field.

[1] This information is not an actual description of the fields in the .fdb, files, but instructions on where to find the information for the True Type fonts you are adding.

[2] Weight attributes that are recognized in the Text Style Chooser are “Extra-Bold,” “SemiBold,” “Bold,” “Heavy,” “Medium,” “Light” and “Thin;” the only slant attribute that is recognized is “Italic.”

[3] This file must be in the $IMAGINE_HOME/etc/fonts directory. If you do not have a downloadable ASCII PostScript font file for this font, use the word “none.”

Example .fdb Entries

Below is an example of an entry in an .fdb file for a font that uses the standard ERDAS IMAGINE font in the text entry fields.

Arial Thin

Arial Narrow

arial.ps

“default”

LEFT_TO_RIGHT

“AaBbCc”

“MSW”

The fields are printed on separate lines for space reasons. They should all be on one line in the .fdb file.

Below is an example of an entry for a font for which there is no downloadable PostScript file. This example uses the same font for the text entry fields as for the annotation itself.

“Suu kyi”

“Suu kyi”

“none”

“Suu kyi”

LEFT_TO_RIGHT

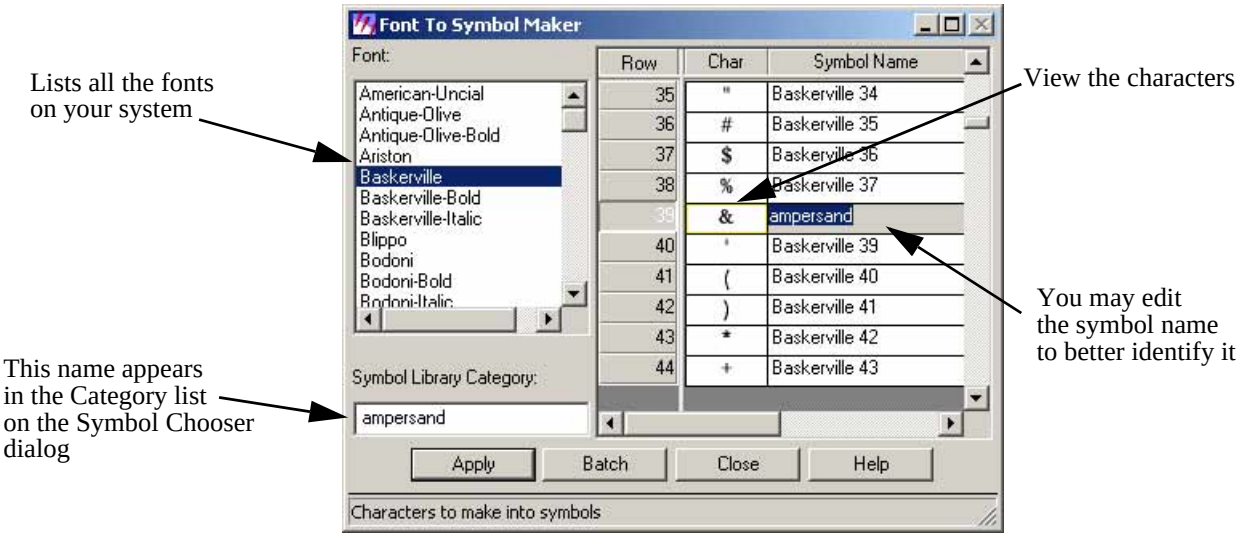
“AaBbCc”

“MSW”

See $IMAGINE_HOME/etc/fonts/fontlist.fdb for other examples.

Font to Symbol Utility

ERDAS IMAGINE contains a utility for converting font sets into Symbol Libraries for use in Annotation layers. This utility is accessed by clicking **Utilities | Font to Symbol** from the menu bar on the ERDAS IMAGINE icon panel.



1. To create a new symbol library, left-click on a font in the Font list. The CellArray displays the characters and Symbol Names
2. Select a row by left-clicking on the Row number.
3. Rename the Symbol by left clicking on the symbol name. In this case, “Baskerville 38” has already been changed to “ampersand.”
4. If you change the symbol name, you will need to rename the Symbol Library Category by left clicking in the Symbol Library Category field and typing in a new name.
5. Click Apply.

   The Symbol Library has been created. It references the font set on your system and is ready to use in Annotation layers.

This utility references the fonts listed on your computer. If you remove that font, the symbol library will be lost.

If you want to transfer the symbol library, you must also include the referenced font set.

Chapter 10

Configuring IMAGINE VirtualGIS

Stereo Configuration for Windows Systems

Only Stereo-In-A-Window is supported for Windows NT, Windows 2000, and Windows XP Professional. A stereo graphics emitter, an emitter cable, liquid crystal glasses, and a stereo-capable graphics card are required to use the **Stereo-In-A-Window** option.

Most stereo-capable graphics cards provide a control panel for enabling and disabling stereo display (see your graphics card's instructions). The card must be stereo-enabled before starting IMAGINE VirtualGIS.

Contact StereoGraphics (http://www.StereoGraphics.com) for the specific cable needed to work with your system and graphics card.

ERDAS IMAGINE Preference Settings

Several ERDAS IMAGINE preferences can be modified to improve the performance of IMAGINE VirtualGIS. These changes may affect other applications running within the ERDAS IMAGINE environment.

ERDAS IMAGINE Image Files (Native)

The **Memory Map File Size Limit** and **Memory Map Segment Height** preferences should both be set to 0.000. This disables memory mapping. Some Virtual Worlds built in the Virtual World Editor could be greater than the defaults displayed.

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