# Print command (File menu)

Use this command to print a document. This command presents a Print dialog box, where you may specify the range of pages to be printed, the number of copies, the destination printer, and other printer setup options.

## Shortcuts

Toolbar: Keys: CTRL+P



#### Print dialog box

The following options allow you to specify how the document should be printed:

#### Printer

This is the active printer and printer connection. Choose the Setup option to change the printer and printer connection.

#### Setup

Displays a <u>Print Setup dialog box</u>, so you can select a printer and printer connection.

#### Print Range

Specify the pages you want to print:

All	Prints the entire document.
Selectio	Prints the currently selected text.
n	
Pages	Prints the range of pages you specify in the From and To boxes.

# Copies

Specify the number of copies you want to print for the above page range.

#### **Collate Copies**

Prints copies in page number order, instead of separated multiple copies of each page.

#### **Print Quality**

Select the quality of the printing. Generally, lower quality printing takes less time to produce.

# **Print Progress Dialog**

The Printing dialog box is shown during the time that True3D is sending output to the printer. The page number indicates the progress of the printing.

To abort printing, choose Cancel.

#### Print Preview command (File menu)

Use this command to display the active document as it would appear when printed. When you choose this command, the main window will be replaced with a print preview window in which one or two pages will be displayed in their printed format. The <u>print preview toolbar</u> offers you options to view either one or two pages at a time; move back and forth through the document; zoom in and out of pages; and initiate a print job.

#### Print Preview toolbar

The print preview toolbar offers you the following options:

# Print

Bring up the print dialog box, to start a print job.

# Next Page

Preview the next printed page.

#### Prev Page

Preview the previous printed page.

## One Page / Two Page

Preview one or two printed pages at a time.

# Zoom In

Take a closer look at the printed page.

# Zoom Out

Take a larger look at the printed page.

# Close

Return from print preview to the editing window.

# Print Setup command (File menu)

Use this command to select a printer and a printer connection. This command presents a <u>Print Setup dialog</u> <u>box</u>, where you specify the printer and its connection.

#### **Print Setup dialog box**

The following options allow you to select the destination printer and its connection.

#### Printer

Select the printer you want to use. Choose the Default Printer; or choose the Specific Printer option and select one of the current installed printers shown in the box. You install printers and configure ports using the Windows Control Panel.

#### Orientation

Choose Portrait or Landscape.

#### Paper Size

Select the size of paper that the document is to be printed on.

#### **Paper Source**

Some printers offer multiple trays for different paper sources. Specify the tray here.

#### Options

Displays a dialog box where you can make additional choices about printing, specific to the type of printer you have selected.

# Network...

Choose this button to connect to a network location, assigning it a new drive letter.

# Page Setup command (File menu)

<< Write application-specific help here. >>

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# True3D General

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## The True3D Tutorial

(New topic text goes here.)

## User Guide

(New topic text goes here.)

# **True3D Help Index**

# Reference Manual (Technical Background, Tutorial, and User Guide)

# True3D

# The True Hidden 3D Design Software

Version 1.0 for Windows® 95 and Windows NT

Tel.: (613) 723-7680

E-mail: info\_true3d@yahoo.com dzfeng@phy.ulaval.ca

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#### The File Menu

The File menu offers the following commands:

<u>New</u>	Creates a new document.
<u>Open</u>	Opens an existing document.
<u>Close</u>	Closes an opened document.
<u>Save</u>	Saves an opened document using the same file name.
Save As	Saves an opened document to a specified file name.
<u>Print</u>	Prints a document.
<u>Print</u>	Displays the document on the screen as it would appear printed.
Preview	
Print Setup	Selects a printer and printer connection.
<u>Send</u>	Sends the active document through electronic mail.
<u>Exit</u>	Exits True3D.

#### The Edit Menu

The Edit menu offers the following commands:

<u>Undo</u>	Reverse previous editing operation.		
<u>Cut</u>	Deletes data from the document and moves it to the clipboard.		
<u>Copy</u>	Copies data from the document to the clipboard.		
<u>Paste</u>	Pastes data from the clipboard into the document.		
<u>Paste Link</u>	Pastes from the clipboard a link to data in another application.		
Insert New	Inserts and embeds an object, such as a chart or an equation in a document.		
<u>Object</u>			
<u>Links</u>	List and edit links to embedded documents.		

#### The View Menu

The View menu offers the following commands:

<u>Toolbar</u>	Shows or hides the toolbar.
<u>Status Bar</u>	Shows or hides the status bar.

The Window Menu

The Window menu offers the following commands, which enable you to arrange multiple views of multiple documents in the application window:

New Window	Creates a new window that views the same document.
<u>Cascade</u>	Arranges windows in an overlapped fashion.
<u>Tile</u>	Arranges windows in non-overlapped tiles.
Arrange Icons	Arranges icons of closed windows.
<u>Split</u>	Split the active window into panes.
<u>Window 1,</u>	Goes to specified window.
<u>2,</u>	

## The Help Menu

The Help menu offers the following commands, which provide you assistance with this application:

	<u>Help</u>	Offers you an index to	topics on which yo	u can get help.
--	-------------	------------------------	--------------------	-----------------

<u>Topics</u>

<u>About</u> Displays the version number of this application.

# New command (File menu)

Use this command to create a new document in True3D

You can open an existing document with the **<u>Open command</u>**.

# Shortcuts



Toolbar: Keys: CTRL+N

# File New dialog box

<< Delete this help topic if your application supports only one document type. >>

Specify the type of document you wish to create: << List your application's document types here >>

# Open command (File menu)

Use this command to open an existing document in a new window. You can open multiple documents at once. Use the Window menu to switch among the multiple open documents. See <u>Window 1, 2, ... command</u>.

You can create new documents with the <u>New command</u>.

Shortcuts



#### File Open dialog box

The following options allow you to specify which file to open:

#### **File Name**

Type or select the filename you want to open. This box lists files with the extension you select in the List Files of Type box.

#### List Files of Type

Select the type of file you want to open:

<< List your application's file types here. >>

#### Drives

Select the drive in which True3D stores the file that you want to open.

# Directories

Select the directory in which True3D stores the file that you want to open.

#### Network...

Choose this button to connect to a network location, assigning it a new drive letter.

#### Close command (File menu)

Use this command to close all windows containing the active document. True3D suggests that you save changes to your document before you close it. If you close a document without saving, you lose all changes made since the last time you saved it. Before closing an untitled document, True3D displays the <u>Save As dialog</u> <u>box</u> and suggests that you name and save the document.

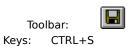
You can also close a document by using the Close icon on the document's window, as shown below:



#### Save command (File menu)

Use this command to save the active document to its current name and directory. When you save a document for the first time, True3D displays the <u>Save As dialog box</u> so you can name your document. If you want to change the name and directory of an existing document before you save it, choose the <u>Save As command</u>.

#### Shortcuts



# Save As command (File menu)

Use this command to save and name the active document. True3D displays the <u>Save As dialog box</u> so you can name your document.

To save a document with its existing name and directory, use the <u>Save command</u>.

#### Send command (File menu)

Use this command to send the active document through electronic mail. This command presents a mail window with the active document attached to it. You may then fill out the To: field, Subject: field, etc., and add text to the body of the message if you wish. When you are finished you may click the "Send" button to send the message.

#### File Save As dialog box

The following options allow you to specify the name and location of the file you're about to save:

#### **File Name**

Type a new filename to save a document with a different name. A filename can contain up to eight characters and an extension of up to three characters. True3D adds the extension you specify in the Save File As Type box.

# Drives

Select the drive in which you want to store the document.

#### Directories

Select the directory in which you want to store the document.

#### Network...

Choose this button to connect to a network location, assigning it a new drive letter.

<< Add other File Save As dialog box options depending on which ones your application chooses via the OFN\_ flags of the OPENFILENAME structure used by the CFileDialog. >>

# 1, 2, 3, 4 command (File menu)

Use the numbers and filenames listed at the bottom of the File menu to open the last six documents you closed. Choose the number that corresponds with the document you want to open.

# Exit command (File menu)

Use this command to end your True3D session. You can also use the Close command on the application Control menu. True3D prompts you to save documents with unsaved changes.

#### Shortcuts

Mouse: Double-click the application's Control menu button.



Keys: ALT+F4

#### Undo/Can't Undo command (Edit menu)

<< Your application's user interface for Undo may differ from the one described below. Modify this help text accordingly. >>

Use this command to reverse the last editing action, if possible. The name of the command changes, depending on what the last action was. The Undo command changes to Can't Undo on the menu if you cannot reverse your last action.

#### Shortcuts



Keys: CTRL+Z or ALT-BACKSPACE

# Redo command (Edit menu)

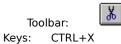
<< Write application-specific help here. >>

## Cut command (Edit menu)

Use this command to remove the currently selected data from the document and put it on the clipboard. This command is unavailable if there is no data currently selected.

Cutting data to the clipboard replaces the contents previously stored there.

Shortcuts

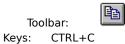


# Copy command (Edit menu)

Use this command to copy selected data onto the clipboard. This command is unavailable if there is no data currently selected.

Copying data to the clipboard replaces the contents previously stored there.

Shortcuts



# Paste command (Edit menu)

Use this command to insert a copy of the clipboard contents at the insertion point. This command is unavailable if the clipboard is empty.

## Shortcuts

Toolbar: Keys: CTRL+V



## Toolbar command (View menu)

Use this command to display and hide the Toolbar, which includes buttons for some of the most common commands in True3D, such as File Open. A check mark appears next to the menu item when the Toolbar is displayed.

See <u>Toolbar</u> for help on using the toolbar.

#### Toolbar



The toolbar is displayed across the top of the application window, below the menu bar. The toolbar provides quick mouse access to many tools used in True3D,

To hide or display the Toolbar, choose Toolbar from the View menu (ALT, V, T).

<< Add or remove toolbar buttons from the list below according to which ones your application offers. >>





Open a new document.

2 Open an existing document. True3D displays the Open dialog box, in which you can locate and open the desired file.



Save the active document or template with its current name. If you have not named the document, True3D displays the Save As dialog box.



Print the active document.



Remove selected data from the document and stores it on the clipboard.



Copy the selection to the clipboard.



Insert the contents of the clipboard at the insertion point.



Reverse the last editing. Note: You cannot undo some actions.



Go to the first record in the current selection.



Go to the previous record in the current selection.



M

Go to the last record in the current selection.

## Status Bar command (View menu)

Use this command to display and hide the Status Bar, which describes the action to be executed by the selected menu item or depressed toolbar button, and keyboard latch state. A check mark appears next to the menu item when the Status Bar is displayed.

See <u>Status Bar</u> for help on using the status bar.

#### **Status Bar**

CAP

The status bar is displayed at the bottom of the True3D window. To display or hide the status bar, use the Status Bar command in the View menu.

The left area of the status bar describes actions of menu items as you use the arrow keys to navigate through menus. This area similarly shows messages that describe the actions of toolbar buttons as you depress them, before releasing them. If after viewing the description of the toolbar button command you wish not to execute the command, then release the mouse button while the pointer is off the toolbar button.

The right areas of the status bar indicate which of the following keys are latched down:

Indicator	Description
CAP	The Caps Lock key is latched down.
NUM	The Num Lock key is latched down.
SCRL	The Scroll Lock key is latched down.

#### New command (Window menu)

Use this command to open a new window with the same contents as the active window. You can open multiple document windows to display different parts or views of a document at the same time. If you change the contents in one window, all other windows containing the same document reflect those changes. When you open a new window, it becomes the active window and is displayed on top of all other open windows.

# Cascade command (Window menu)

Use this command to arrange multiple opened windows in an overlapped fashion.

# Tile command (Window menu)

Use this command to arrange multiple opened windows in a non-overlapped fashion.

# Tile Horizontal command (Window menu)

Use this command to vertically arrange multiple opened windows in a non-overlapped fashion.

# Tile Vertical command (Window menu)

Use this command to arrange multiple opened windows side by side.

#### Window Arrange Icons Command

Use this command to arrange the icons for minimized windows at the bottom of the main window. If there is an open document window at the bottom of the main window, then some or all of the icons may not be visible because they will be underneath this document window.

#### Split Command (Window menu)

Use this command to split the active window into panes. You may then use the mouse or the keyboard arrows to move the splitter bars. When you are finished, press the mouse button or enter to leave the splitter bars in their new location. Pressing escape keeps the splitter bars in their original location. << In a single document interface application, this command will appear on the View menu. >>

# 1, 2, ... command (Window menu)

True3D displays a list of currently open document windows at the bottom of the Window menu. A check mark appears in front of the document name of the active window. Choose a document from this list to make its window active.

## Index command (Help menu)

Use this command to display the opening screen of Help. From the opening screen, you can jump to step-bystep instructions for using True3D and various types of reference information.

Once you open Help, you can click the Contents button whenever you want to return to the opening screen.

# Using Help command (Help menu)

Use this command for instructions about using Help.

# About command (Help menu)

Use this command to display the copyright notice and version number of your copy of True3D.

## **Context Help command**



Use the Context Help command to obtain help on some portion of True3D. When you choose the Toolbar's Context Help button, the mouse pointer will change to an arrow and question mark. Then click somewhere in the True3D window, such as another Toolbar button. The Help topic will be shown for the item you clicked.

#### Shortcut

Keys: SHIFT+F1

# Title Bar

<< Show your application's title bar here. >>

The title bar is located along the top of a window. It contains the name of the application and document.

To move the window, drag the title bar. Note: You can also move dialog boxes by dragging their title bars.

A title bar may contain the following elements:

- Application Control-menu button
- Document Control-menu button
- Maximize button
- Minimize button
- Name of the application
- Name of the document
- Restore button

## Scroll bars

Displayed at the right and bottom edges of the document window. The scroll boxes inside the scroll bars indicate your vertical and horizontal location in the document. You can use the mouse to scroll to other parts of the document.

<< Describe the actions of the various parts of the scrollbar, according to how they behave in your application. >>

#### Size command (System menu)

Use this command to display a four-headed arrow so you can size the active window with the arrow keys.

After the pointer changes to the four-headed arrow:

- 1. Press one of the DIRECTION keys (left, right, up, or down arrow key) to move the pointer to the border you want to move.
- 2. Press a DIRECTION key to move the border.
- 3. Press ENTER when the window is the size you want.

Note: This command is unavailable if you maximize the window.

#### Shortcut

Mouse: Drag the size bars at the corners or edges of the window.

## Move command (Control menu)

Use this command to display a four-headed arrow so you can move the active window or dialog box with the arrow keys.



Note: This command is unavailable if you maximize the window.

#### Shortcut

Keys:

CTRL+F7

# Minimize command (application Control menu)

Use this command to reduce the True3D window to an icon.

## Shortcut

Μοι	use:	Click the minimize icon	on the title bar.
Keys:	ALT+F9		

# Maximize command (System menu)

Use this command to enlarge the active window to fill the available space.

## Shortcut

Mouse: Click the maximize icon on the title bar; or double-click the title bar. Keys: CTRL+F10 enlarges a document window.

# Next Window command (document Control menu)

Use this command to switch to the next open document window. True3D determines which window is next according to the order in which you opened the windows.

## Shortcut

Keys: CTRL+F6

# Previous Window command (document Control menu)

Use this command to switch to the previous open document window. True3D determines which window is previous according to the order in which you opened the windows.

## Shortcut

Keys: SHIFT+CTRL+F6

#### **Close command (Control menus)**

Use this command to close the active window or dialog box.

Double-clicking a Control-menu box is the same as choosing the Close command.

# **%**

Note: If you have multiple windows open for a single document, the Close command on the document Control menu closes only one window at a time. You can close all windows at once with the Close command on the File menu.

#### Shortcuts

Keys:CTRL+F4 closes a document windowALT+F4 closes the <<YourType>> window or dialog box

# Restore command (Control menu)

Use this command to return the active window to its size and position before you chose the Maximize or Minimize command.

#### Switch to command (application Control menu)

Use this command to display a list of all open applications. Use this "Task List" to switch to or close an application on the list.

#### Shortcut

Keys: CTRL+ESC

#### **Dialog Box Options**

When you choose the Switch To command, you will be presented with a dialog box with the following options:

#### Task List

Select the application you want to switch to or close.

#### Switch To

Makes the selected application active.

#### **End Task**

Closes the selected application.

## Cancel

Closes the Task List box.

#### Cascade

Arranges open applications so they overlap and you can see each title bar. This option does not affect applications reduced to icons.

## Tile

Arranges open applications into windows that do not overlap. This option does not affect applications reduced to icons.

#### Arrange Icons

Arranges the icons of all minimized applications across the bottom of the screen.

# Ruler command (View menu)

# Choose Font dialog box

# Choose Color dialog box

# Find command (Edit menu)

# Find dialog box

# Replace command (Edit menu)

# Replace dialog box

# Repeat command (Edit menu)

Use this command to repeat the last editing command carried out. The Repeat menu item changes to Can't Repeat if you cannot repeat your last action.

## Shortcut

Key: F4

# Clear command (Edit menu)

# Clear All command (Edit menu)

<< Write application-specific help here. >>

# Next Pane

<< Write application-specific help here. >>

# **Prev Pane**

<< Write application-specific help here. >>

# Reference Manual (Technical Background, Tutorial, and User Guide)

# True3D

# The True Hidden 3D Design Software

Version 1.0 for Windows® 95 and Windows NT

Tel.: (613) 723-7680

E-mail: info\_true3d@yahoo.com dzfeng@phy.ulaval.ca

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# No Help Available

No help is available for this area of the window.

## No Help Available

No help is available for this message box.

<< If you wish to author help specific to each message box prompt, then remove the AFX\_HIDP\_xxx values from the [ALIAS] section of your .HPJ file, and author a topic for each AFX\_HIDP\_xxx value. For example, AFX\_HIDP\_INVALID\_FILENAME is the help topic for the Invalid Filename message box. >>

### Disclaimer

# True3D

# The True Hidden 3D Design Software

Version 1.0 for Windows® 95 and Windows NT

Tel.: (613) 723-7680

E-mail: info\_true3d@yahoo.com dzfeng@phy.ulaval.ca

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#### Welcome

Welcome to True3D - a powerful and user-friendly design software for creating true hidden 3D graphics.

The true hidden 3D images are also known as Single Image Random Dot Stereograms (SIRDS), or Single Image Stereograms (SIS). By focusing your eyes behind the image, you can see true 3D image without the need for special glasses or equipment.

The true hidden 3D image design can be greatly facilitated by the use of the appropriate computer software: True3D. The True3D uses advanced algorithms and offers different options and tools for design hidden 3D images. By using the True3D software, you can build your own stereogram gallery, create unique postcards for your friends and so on.

# Installing True3D

Before installing True3D, make sure that you have the system requirements described below.

Hardware and Software Requirement

True3D requires the following system configuration:

- Microsoft Windows 95 or Windows NT 4.0
- 16MB memory
- 10 MB free hard disk space

#### True3D Directory

By default, the Installer will create a True3D directory on your hard disk. The True3D directory will contain the following subdirectories:

\TUTORIAL – contain examples \DEPTH – contains depth image files \BKG – contains background image files \DOC – contains True3D Manual

# How to Learn True3D

You can quickly become an efficient True3D user by reading carefully the Technical Background, doing the Tutorial lessons, referring to the User Guide, and consulting the On line Help.

# **Technical Support**

Technical support is provided only for registered users. • Technical support by E-mail info\_true3d@yahoo.com

dzfeng@phy.ulaval.ca

#### Register

True3D is a shareware. You can use it for free. If you found it useful and wish to have a full functional software, you need to registration your copy.

Limitation for Unregistered True3D Software

- True3D image is limited to the size 1024X1024 pixels
- Signature on the final True3D image
- No upgraded
- No Technical support

The Advantage for Registered True3D Software

- Full functional software
- Free upgraded to all minor release
- Unlimited technical support
- Discounts on new releases

Finally, by registering the software, you provide us with the resources and incentive to support the software with updates and to develop additional quality shareware products in the future.

How to register

Just send a email to the following address Dzfeng@phy.ulaval.ca Info\_true3d@yahoo.com

# what is true Hidden 3D, SIS and SIRDS?

The true hidden 3D pictures are also known as Single Image Random Dot Stereograms (SIRDS), or Single Image Stereograms (SIS). By focusing your eyes behind the image, you can see true 3D image without the need for special glasses or equipment. For details, please refer to:

http://www.cs.waikato.ac.nz/~singlis/sirds/general.thml

# How to See Hidden 3D?

http://www.cs.waikato.ac.nz/~singlis/sirds/general.thml

### How to Create Hidden 3D?

http://www.cs.waikato.ac.nz/~singlis/sirds/general.thml

You can create Hidden 3D by using our True3D software

In True3D, some advanced algorithms are used to create high quality 3D images. They are listed as following:

- Rigorous approach
- Hidden surfaces are removed in both horizontal and vertical directions. No geometric distortion for 3D object.
- Enhanced resolution method for low resolution devices
- Support random dot and single image sterograms
- Support 256 gray level and 16 colors depth image
- Tools for modifying depth image
- Tool for adding real images with transparency background

#### How to Create Depth image?

The simplest way to create depth image is using 2D graphics software, such as windows paintbrush. Simple 3D or text depth image can be drawn manually in different colors or shades of gray.

You can create depth image for more complicated 3D object by using 3D graphics software. You need figure out how to get depth information from 3D object for different kind of software.

Finally, by using 3D-measurement equipment, the depth image for real model scene can be created.

# Tutorial

The best way to learn how to work with True3D is to do the Tutorial lessons. By following the step by step instructions, you will see how quickly you can become a highly efficient True3D user.

Lesson 1: Design Simple Hidden 3D

Lesson 2: Design SIS Hidden 3D

Lesson 3: Design Advanced Hidden 3D

### Lesson 1: Design Simple Hidden 3D

In this lesson, you will learn how to create simple True3D image. Also you will learn how to create depth image by using <u>Color</u> <u>Mapping</u> tool.

Step 1

From the **Eile menu**, click New.

You will see two windows. One is a Depth image window, the other is a True3D image window.

Step 2

Click the right hand mouse button on Depth image window. Select <u>Open</u>. Read the bitmap file located on True3D\Tutorial\ T1depth.bmp. This kind of bitmap can be easily created by windows paintbrush.

Step 3

Click the right mouse button on Depth image window. Select <u>Color Mapping</u>. Put the following value in the color mapping dialog box and press OK



You will see the color bitmap image changes to gray level bitmap image.

#### Step 4

From Setting menu, click Input. Put the following values in the Input Parameters dialog box and press OK

Eye Pasition	Paper Position
Eye Position X [mm]	Paper to Eye [mm] 200
Eye Pasition Y [mm]	Paper to Object [mm] 400
Resolution	- Over Sample
Some os Display	× 1 Y 1
DPIX (91.44 DPIY (91.44	True3D Image Width 170
Beckground Filled by:	
Random Paterni R G G G T I T I	
Pixel_X · J	
C Template Pattern Loco	
D/(True3D)/Turanel/(T18kg smp	
	0.0000000

#### Step 5

From <u>Execute Menu</u>, click Run. You will see the True3D image in the True3D image window. Here, The True3D image's background is a random color dots. This kind of True3D image is known as Single Image Random Dot Stereograms (SIRDS)



Step 6

Go back to the Input Parameter dialog box, Select Template Pattern. Click on Load. Open the background bitmap file located on \ True3D\Tutorial\T1Bkg.bmp. Press OK to close the <u>Input Parameters</u> dialog box.

#### Step 7

From Execute Menu, Click Run. Now you have create True3D image with a background image. This kind of True3D image is also known as Single Image Stereograms (SIS)

### Lesson 2: Design SIS Hidden 3D

In this lesson, you will know how to create more complicated True3D image.

Assume you already have depth image. By following the step by step, you can create True3D image from depth image.

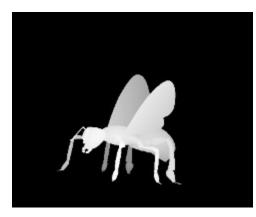
#### Step 1

# From the $\underline{File\ menu}$ , click $\underline{New}$ .

You will see two windows. One is a Depth image window, the other is a True3D image window.

Step 2

Click the right hand mouse button on Depth image window. Select <u>Open</u>. Read the bitmap file located on True3D\Tutorial\T2depth.bmp



#### Step 3

Click the right hand mouse button on Modify Depth Data Put the following data in the dialog box. Press OK

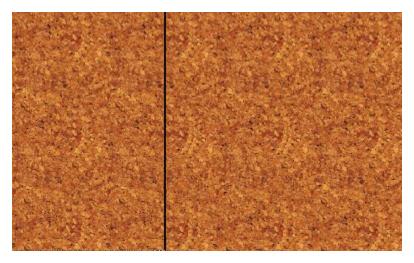
Generate 3D Data	×
Original 3D Properties Max [mm] 251 Min [mm] 4	
Modification Max(mm) 100 Min(mm) 0	
OK Concel Help	J

#### Step 4

From <u>Setting menu</u>, click Input. Put 180 to the True3D image Width. Select Template Pattern. Click on Load. Open the background bitmap file located on \True3D\Tutorial\T2Bkg.bmp.

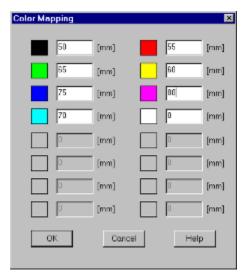
Step 5

From Execute Menu, Click Run. Now you have create another True3D image. By changing the background template pattern and modifying the Depth data, you can change the True3D image.



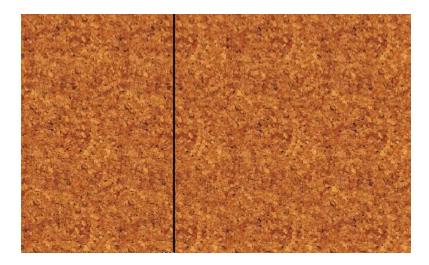
Step 6 Click the right hand mouse button on Depth image window. Select **Inset Depth Image**. Read the bitmap file located on True3D\ Tutorial\T2Insert.bmp. Drag and drop the inserted bitmap to the up center.

Step 7 Click the right hand mouse button on Depth image window. Select <u>Color Mapping</u> Put the following data in the dialog box and press ΟK



Step 8

From Execute Menu, Click Run. Now you have create a new True3D image. You will see a title has been added



### Lesson 3: Design Advanced Hidden 3D Image

In this Lesson, you will learn how to edit true3D image. By using Import Image tool, you can add real images with different depths. Also, you can add title, frame and merge the depth image with the true3D image.

Step 1

Open Tutorial2.t3d project. Then, from Execute Menu, Click Run.

Step 2

Click the right hand mouse button on True3D image window. Select Import Image. Read the bitmap file located on True3D Tutorial/face.bmp. You will see a face bitmap inside the True3D image.

Step 3

Click the right hand mouse button on True3D image window. Select Clone. Put the following parameters in the dialog box.

Add on		2
Transporent	Calor	
Red	255	Close
Green	255	
Blue	255	Help
-Depth Into-		
Object Depth	[mm] [50]	Apply
Duplicate Nu	mber 3	Join Image
		Remove

Press Apply and then Join Image

Step 4

Click the right hand mouse button on True3D image window. Select Import Image. Read the bitmap file located on True3D\Tutorial\ banana.bmp. You will see a banana bitmap inside the True3D image.

#### Step 5

Click the right hand mouse button on True3D image window. Select Clone. Put the following parameters in the dialog box.

ld on		
Transparent (	Calor	
Red	255	Close
Green	255	
Blue	255	Help
Depth Into		
Object Depth [	[mm] [65]	Apply
Duplicate Nur	iber 3	Join Image
		Remove

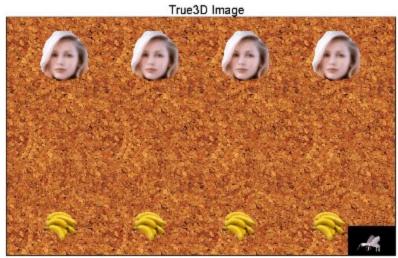
Press Apply and then Join Image

Step 6

Click the right hand mouse button on True3D image window. Select Edit True3D Image. Put the following parameters to the dialog box

Edit Image	×
Title	
True3D Imoge	Choose Font
- Footnote	
Created by True3D	Choose Font
Border	Choose Color
Wipth [mm] 0.25	
OK Cancel	Help

Step 7 Now you have create the True3D image with title, frame, depth image and different depth true images



Created by True3D on 20:18, September 03, 1988

That is the end of tutorial.

# The Depth Image Menu

The Depth Image menu offers the following commands

Open Opens an existing Depth Image (Bitmap format)

Save Saves an opened Depth Image (Bitmap format) using the same file name

Save As Saves an opened Depth Image (Bitmap format) to a specified file name

# The True3D Image Menu

The True3D Image menu offers the following commands:

Open Opens an existing True3D Image (Bitmap format)

Save Saves an opened True3D Image (Bitmap format) using the same file name

Save As Saves an opened True3D Image (Bitmap format) to a specified file name

# The Tools Menu

The Tools Menu offers the following commands:

Color->Gray	Convert color image to gray level image
Import Depth Image	Import depth image (only support 16 colors bitmap)
Color Mapping	mapping the bitmap color to 3d object's depth
Input True3D Image	Import True3D image
<u>Clone</u>	Clone image on True3D image
Modify Depth Data	Tool for modify the depth data
Edit True3D Image	Tool for Edit (add Title, Border) True3D Image

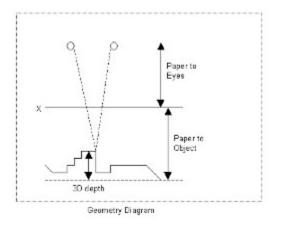
# The Setting Menu

The Setting menu offers the following commands:

Input setting the input parameters for true3D project

#### Input

#### Define the most parameters in this dialog box



Eye Position X: Eye position in horizontal direction

Eye Position Y: Eye position in vertical direction

(The central point (X=0, Y=0) is in the central point of true3D image)

Paper to Eyes: The Distance from your eyes to the paper

Paper to Object: The distance from paper to object reference plane. If the object surface is just on the reference plane, the object depth at this point is zero.

Same as Display (check box): If it is selected, using the display's resolution to create true3D image.

DPIX: Resolution in horizontal direction (dots per inch). If 'Same as Display' is selected, it displays the resolution of your monitor.

DPIY: Resolution in vertical direction (dots per inch). If 'Same as Display' is selected, it displays the resolution of your monitor.

Over Sample

X: Over sampling ratio in X direction

Y: Over sampling ratio in Y direction

These two parameters are very useful when the resolution of your output device is low

Ransom Pattern: If this radio button is selected, the True3D image will be filled by random pattern.

Pixel\_X: This slider controls the points in X direction for one pixel of True3D image. Maximum is in the right hand side. Pixel\_Y: This slider controls the points in Y direction for one pixel of True3D image. Maximum is in the right hand side.

R. G. B: These sliders controls the RGB color region that are used to generate random background

Template Pattern: If this radio button is selected, the True3D image will be filled by Template pattern stored in a file Load: Press this button to load the template pattern in bitmap format.

OK: If this button is pressed, the input data in this dialog box will be updated. Cancel: If this button is pressed, the input data in this dialog box will not be updated. Help: Display helps information for this dialog box

### Clone

Using this dialog box to add images on the True3D image

#### Transparent color

Red: Enter Red value for the transparent color

- Green: Enter Green value for the transparent color
- Blue: Enter Blue value for the transparent color
- The color same as the entered transparent color on Add on image will be transparent for the True3D image
- You can also double click on the Add on image to choose the transparent color

## Depth Info

Object Depth: Enter depth value here. The Add on images will be duplicated based on the depth value Duplicate Number: Enter the number that controls how many Add on images will be cloned

Apply: Clone the add on images, you can still remove it by press Remove button Remove: Remove images from the True3D image. You can't remove images after you pressed Join Image button Join Image: Merge the add on images with True3D image Close: Close the dialog box

Help: Display the help information of this dialog box

# Modify Depth Data

Using this dialog to modify the depth data of the 3D object

**Original 3D Properties** 

Max: Displays the maximum depth value before modification Min: Displays the minimum depth value before modification

Modification

Max: Enter the new maximum depth value to be modified Min: Enter the new minimum depth value to be modified

OK: modify the depth data with the new maximum and minimum values. Cancel: does nothing Help: Display the help information of this dialog box

# Edit True3D Image

Using this dialog box to add title, footnote and border to the True3D image

Title: Type the title here Choose Font: Choose font for the Title

Title: Type the Footnote here Choose Font: Choose font for the Footnote

Border: Type the width (in mm) of the Border here Choose Color: Choose color for the Border

OK: Draw title, Footnote, border and merge the depth image with the True3D image Cancel: Remove the Title, Footnote, border and the depth image from the True3D image Help: Display help information of this dialog box

## The Execute Menu

The Execute menu offers the following commands:

Run Starts to build true3D image

# **Color Mapping**

Using this dialog box to mapping 16 color image to depth image

Enter the depth value after each color bar. 16 colors bitmap image will be converted to depth image based on depth value you entered after each color bar.

OK: Convert the 16 colors bitmap to depth image Cancel: Does nothing Help: Display the help information of this dialog box

## New Depth Image Window

Create a new depth image window

## New True3D Image Window

Create a new true3D window

Closes this dialog and saves any changes you have made.

Closes this dialog and saves any changes you have made.

Closes this dialog without saving any changes you have made.

Select your preferred option.

Select your preferred option.

Click this button to make your choice.

Click this button to make your choice.

Check your desired options.

Closes this dialog and saves any changes you have made.

Closes this dialog without saving any changes you have made.

Click this button to make your choice.

Closes this dialog without saving any changes you have made.

Closes this dialog and saves any changes you have made.

Closes this dialog without saving any changes you have made.

Closes this dialog and saves any changes you have made.

Closes this dialog without saving any changes you have made.

Check your desired options.

Closes this dialog and saves any changes you have made.

Closes this dialog and saves any changes you have made.