



Table of Contents

1	Introduction			
2	Main Scr	een		13
	2.1	Main S	creen	13
		2.1.1	Menubar	14
		2.1.2	Toolbar	15
		2.1.3	Patient Information	16
		2.1.4	Thumbnail (Preview window)	20
		2.1.5	Function Tab	21
	2.2	Contex	t Menu	23

3 General Operating Instructions24

3.1	File		24
	3.1.1	Open	.24
	3.1.2	Save As	.25
	3.1.3	CT Save As	.26
	3.1.4	Export to PACS Gateway	.30
	3.1.5	AnyChart	.30
	3.1.6	Analysis	.30
	3.1.7	EzCodi	.30

3.1.8	SMS	30
3.1.9	Dental CT	31
3.1.10	Panorama	31
3.1.11	Cephalo	31
3.1.12	CR Scanner	31
3.1.13	Intraoral Sensor	31
3.1.14	Intraoral Camera	31
3.1.15	Digital Camera	31
3.1.16	DICOM Print	32
3.1.17	Report	32
3.1.18	Export to E-mail	32
3.1.19	Acquire	33
3.1.20	Select TWAIN Source	33
3.1.21	Save to DB (TWAIN)	33
3.1.22	Save As (TWAIN)	34
3.1.23	Exit	34
Edit		.35
3.2.1	Initialize	35
View		.35
3.3.1	ToolBar	35
3.3.2	StatusBar	35
3.3.3	Overlay	36
3.3.4	Implant	36
3.3.5	Information	36

3.2

3.3

3.3.6	Exif Information	
3.3.7	Memo	

4	Databas	e Man	nagement	40
	4.1	Patient	t Management	42
		4.1.1	Patient Search	42
		4.1.2	Patient Registration	43
		4.1.3	Modifying Patient Information	46
		4.1.4	Deleting Patient Information	47
		4.1.5	All (Whole Patient List)	48
		4.1.6	Reset	48
	4.2	Image	Management	49
		4.2.1	Image Transfer	49
		4.2.2	Deleting an Image	51
	4.3	Treatm	nent Management	53
	4.4	Export	Data	56
	4.5	Import	Files	58
	4.6	Import	Split Window	61
	4.7	User Account Manager		
	4.8	Chang	je Login Account	67

5 Image Acquisition			.68
	5.1	Panorama	68

5.2 Dental CT	70
---------------	----

6	Save To DB		
	6.1	Save to DB	73

7	Image Processing	.76	6

7.1	Drawing	J Tools	76
	7.1.1	Free Draw	76
	7.1.2	Line	77
	7.1.3	Poly-Line	78
	7.1.4	Rectangle	80
	7.1.5	Ellipse	81
	7.1.6	Color	82
	7.1.7	Style	83
	7.1.8	Delete	83
7.2	Measur	ng Tools	84
	7.2.1	Calibration by Model	84
	7.2.2	User Calibration	86
	7.2.3	Distance	89
	7.2.4	Continuous Distance	89
	7.2.5	Angle	90
	7.2.6	Delete All	91
7.3	Imaging	Tools	92

7.3.1	Invert	93
7.3.2	Sharpen	94
7.3.3	Sharpen More	95
7.3.4	Median	96
7.3.5	Gray Scale	97
7.3.6	Coloring	98
7.3.7	Film Effect	99
7.3.8	Rotation	100
7.3.9	Local Enhancement	104
7.3.10	Zoom In/Out	105
7.3.11	Move	106
7.3.12	Property	107
7.3.13	Adjust	109

8 Special Tools				110	
	8.1	Magnifi	ier	110	
	8.2	Magnifi	ier LE	111	
	8.3	Slide		112	
		8.3.1	EasyDent's Image Slide	112	
		8.3.2	External Image Slide	115	
	8.4	Profile		116	
	8.5	Dual M	onitor	117	
	8.6	Whiten	ing	118	
		8.6.1	Auto Whitening	118	

	8.6.2	Select Area	9
	8.6.3	Area Whitening12	0
	8.6.4	Brush	1
8.7	Snapsł	not	3
	8.7.1	Full Screen	3
	8.7.2	Window124	4
	8.7.3	Area12	6
8.8	Crop In	nage128	8
8.9	Layout	Editor	1
8.10	Layout	Viewer	5
	8.10.1	Intra-Oral Sensor Shooting13	8
	8.10.2	Intra-Oral Sensor Setting14	0

9	Implant	Simula	ation	.141
	9.1	Add Im	plant	141
		9.1.1	Moving an Implant	142
		9.1.2	Rotating an Implant	142
	9.2	Delete	All Implants	143
	9.3	Add Im	plant Crown	144
		9.3.1	Moving the Implant Crown	145
		9.3.2	Rotating the Implant Crown	145
		9.3.3	Adding a Point	146
		9.3.4	Changing the Crown	146

	9.3.5	Changing the Crown Color	147
9.4	Delete	All Implant Crown	. 148

149	/	10Windov
	Main Screen	10.1
	Extended Screen	10.2
	Full Screen	10.3
	1 Window	10.4
	2 (2*1) Window	10.5
	The Other Split Windows	10.6

11 DICON	I Print a	nd Report	159
11.1	EzDIC	OM Print	159
	11.1.1	EzDICOM Print's Requirement (about SCP1)	159
	11.1.2	Using EzDICOM Print	160
	11.1.3	Setting up the DICOM Printer	164
	11.1.4	Film Options	166
	11.1.5	Zoom	168
	11.1.6	Other Functions	171
	11.1.7	Sample Images of the Preset Forms:	173
11.2	Report		176
	11.2.1	Using the Report Function	176
	11.2.2	Print Setup of the Report	180

	11.2.3	Image Scales of the Report	182
	11.2.4	Comments on the Report	183
	11.2.5	Date Type of the Report	186
11.3	Printer	Outcome	187

189	12CD Publishing		
	Saving Data to the CD/DVD Media	12.1	
	Viewing CD Publication without EasyDent	12.2	

13 Configuration of the Parameters......195

13.1	Network	
	13.1.1 The DB and the File Servers installed on the separate computers	196
	13.1.2 The DB Server and the File Server installed on the same computer	198
13.2	Overlay	199
13.3	Image Processing	200
13.4	Default	201
13.5	Program	206

	14 Interfacing with EzBridge		
208	1 Running EasyDent V4 from EzBridge	14.1	
208	2 Calling Patient Information	14.2	
209	3 Calling Images of the Patient	14.3	

APPENDIX

1	Installing EasyDent V4	210

2 Uninstalling Software......215

2.1	Uninstalling EasyDent	215
2.2	Uninstalling Microsoft SQL Server Desktop Engine	217
2.3	Deleting the EasyDent4 and MS SQL Folders	217

3	FAQ		219
	3.1	EasyDent V4 doesn't run after installation	.219
	3.2	Can't link to DB server via the network (Windows XP)	.221

4	Patching for	EasyDent	Dicom	Print2	223
-					

5	Icons	
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EasyDent— a 2D image viewer and analysis software program— is protected under the Copyright Laws and the Computer Program Protection Law of Korea. Refer to the terms and conditions of Agreement relevant to the use of the product in the End User License Agreement. You can find the Agreement on the installation CD. It appears on the screen during product installation.

General Information

This manual provides detailed information on how to use **EasyDent**. This document may not be reproduced in any manner without the prior written consent from the publisher.

It is recommended that users read this user manual thoroughly before using the program in order to learn the installation of EasyDent S/W and the functions of the operating system.

For supplementations, this manual is subject to change without prior notice. A printed manual distributed along with the product may not include contents specific to the latest version of the product. For additional information pertaining to this manual and the product, please contact us at:

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Manufacturer VATECH

User Notices

- 1. To maintain seamless operation, user must read and follow the instructions prior to using **EasyDent**
- 2. User must respect the procedures and instructions described in this manual.
- 3. For the optimal use of EasyDent V4, user must comply with the system requirements.

Introduction

EasyDent is a dental imaging software solution that stores, analyzes and diagnoses patient images that have been acquired through VATECH dental equipment.

EasyDent is equipped with everything you need for digital panoramic and Cephalometric image storage, processing and viewing. **EasyDent** functions as a central storage point for digital images and associated patient data. Images can be acquired directly from equipment that **EasyDent** currently supports. In addition, images can be imported from other digital sources.

With **EasyDent** you can perform the following operations assuming that all the other equipment is ready to use.

- Create and store new patient information in a database
- Capture and store digital X-ray images with exposure values from the device.
- Capture and store intraoral photographs.
- Export and import digital images
- Process images to enhance their diagnostic value with dental-specific tools
- Analyze the image with application-specific measurement tools
- Build an environment with multiple workstations using a database shared over a network.
- Printing images and image related information.

EasyDent can be used in a networked environment. If EasyDent is installed in several computers, the patient and image database can be shared among them and used from different workstations.

2 Main Screen

2.1 Main Screen

To start EasyDent, double-click the **EasyDent** icon on the desktop or open the program from the start menu. Below are the components of the main screen, the first screen you will see when you run EasyDent.

All functions can be selected from the menu bar. In addition, there are graphical symbols on the toolbar for some of the most frequently used functions. This manual primarily describes the procedure through menu bar.

PATIENT ISFO UNDOU INAGE	1 1 C G G G	Q V	1 2	A G	R 10	4 V	9
PATIENT TSFD UINDOU MAGE	BRIGHT CONTRAST GAWINA ZOO	N MAGNIFIER REPORT	DRAWING MERSU	RE WPLANT (ROU	N DHITENING SCREENSHOT	MOVE SELECT	INTIALIZE
PANO/CEPH SENSOR CANERA DENTIAL CT	EasyDent						
Patient Explorer							
	(
TSFD TOTAL SOLUTION FOR DENTAL	Patient Image View	Layouts Co	insultation –				
TOTAL SOCIATION TO A DEMINE	Patient List				Image List		
	Patient Name	Chart No.	Gender	Age Birthday	Image Type		Captured Date
Chart No.	-						
Last Name							
Social ID					-		
Age/Gender							
Treatment							
Mobile							
Tel							
	ī						
Search(Date)							
	J						
	Today Captured List Patient Name Cha	rt No.	Birthday		Patient Name	Chart No.	Birthday
	Patient Name Cha	rt ino.	Birthday		Patient Name	Chart NO.	Birthday
							_

- 1. Menu bar: All functions are divided and listed as items on the menu bar.
- 2. **Toolbar**: Icons created for quick usage of common tasks, such as image acquisition and search of patients and images etc.
- 3. **Patient Information**: Displays a selected patient's photo and personal information such as chart number, name, age, and sex.
- 4. **Thumbnail (Preview Window)**: Displays thumbnails of captured images for the selected patient.
- 5. **Function Tap**: Allows quick selection of different viewing windows within EasyDent.

- 6. Patient List: Displays the list of patients.
- 7. Image List: Displays a list of images for the selected patient.
- 8. **Today's Captured List**: Displays a list of all patients that have had a new image captured and added to their chart within the current work day. If you want to enable this function, click Today Captured List.
- 9. **Network Status**: Indicates the communication status between EasyDent and associated databases.



2.1.1 Menubar

The menu bar consists of menus such as File, Edit, View, Database, Draw, Measure, Image, Tool, Implant, Window, and Help, as shown below.

<u>8</u>	EasyD	ent V	4 Viewer							
File	<u>E</u> dit	View	Data <u>b</u> ase	Draw	<u>M</u> easure	Im <u>ag</u> e	Tool	Implant	<u>W</u> indow	<u>H</u> elp
	1		2		3		4	5	6	7

1. File, Edit, View

These options will be explained in detail in Chapter 3: General Operating Instructions.

2. Database

This option will be explained in detail in Chapter 4: Database Management.

3. Draw, Measure, Image

These options will be explained in detail in Chapter 7: Image Processing.

4. Tool

This option will be explained in detail in **Chapter 8: Special Tools**.

5. Implant

This option will be explained in detail in Chapter 9: Implant Simulation.

6. Window

This option will be explained in detail in Chapter 10: Window.

7. Help

This menu consists of the About EasyDent V4 Viewer, Configuration and Intra-Oral Sensor Setting options.

If you click on **About EasyDent V4 Viewer** on the Help menu, the window shown below will appear. From here you will be able to check the version of your EasyDent software.

About Easy	vDent V4 Vi	ewer (Professional)	×								
	Copyright (c) 2002–2010 by VATECH All rights reserved, Software Version 4,1,4,0 CUSTOMER CENTER										
FAX	CUSTOMER CENTER FAX : 82 + (0)31 - 377 - 1882 E-mail : gcs@vatech.co.kr										
Hom	e page :	http://www.vatech.co.kr									
			OK								

The Configuration options will be explained in detail in Chapter 13: Configuration of the parameters.

The Configuration options will be explained in detail in Section 8.9.3: Intra-Oral Sensor Setting.

2.1.2 Toolbar

Functions that are frequently used are also shown as icons on the Toolbar.



2.1 Main Screen

2.1.3 Patient Information

Patient Explorer										
TISED TOTAL SOLUTION FOR DENTAL										
Chart No.										
First Name										
Last Name										
Social ID										
Age/Gender										
Treatment										
Mobile										
Tel										
E-mail										
Search(Date)										

The Patient Information window displays information of pre-registered patients. Search options include: Chart Number, First and Last name. The search results will appear in the **Patient** Function Tab.

How to search by Chart Number, First Name, or Last Name

Double-click on Chart No., First Name or Last Name to pop up a virtual keyboard, as shown below.

<u>-</u> ile	<u>K</u> ey	boa	ard	50	etti	ngs	;	Help																			
esc		1	1	F.	2	F:	3	F4		F!	5	F6	F7	Ī	F8		F9	F1	10	F11 F12	psc	slk	brk				
•	1		2	3		4	I	5	E	;	7	8		9		D	-		T	bksp	ins	hm	pup	nik	1	-	ŀ
tab		q	Γ	•	e		r	Ι	t	y	Τ	u	i	Τ	0	р	Τ	[1	1	del	end	pdn	7	8	9	Γ
lo	sk		a	s	T	d	T	f	9		h	i	T	k	Б		;	•	Τ	ent				4	5	6	
	hft	1151	1	2	x	T	c	T		b	Γ	n	m	Г								Ŷ		1	2	3	Γ
ctrl		۹.		alt											T	alt			E	etri	-	L	\rightarrow	(E.		e

You can enter the associated patient information by clicking the mouse on the virtual keyboard. Of course, the physical keyboard can be used to do the same job.



When searching for a patient by Chart Number, the search string must be exact.



When searching by First or Last Name, you may obtain search results by inputting just the first letter of the first name. For example, if the name of the patient is 'John Doe', you may input 'J' in First Name and then all first names beginning with 'J' will be retrieved. If you input '_' (underscore) all data from all patients will be retrieved. A patient name from the **Patient List** can be searched by pressing the **Enter** key on the keyboard.

Easyl	Dent	EasyDent	Easy	Dent		EasyDent	EasyDent	EasyDent
					III			
atient	Image View	Layouts (Consultation					
⊃atient	List					Image List		
atient N	ame	Chart No.	Gender	Age	Birthday	Image Type		Captured Date

When you click the name of the patient on the **Patient List** windows, you can view the image information on both the **Thumbnail** and **Image List**.

The Image List indicates images capturing modes such as panoramic, Cephalometric, CT, etc; as well as the tooth positions.

006/08/18 PM 05:27:46 200 Patient Image View		2004/03/20 11 sultation	PM 01:54:	24 2004/1	U3/20 PM 01:18:08 2004/03/	20 PM 01:17:22 2004/03/20 PM 01:
Patient List	and an				Image List	
Patient Name	Chart No.	Gender	Age	Birthday	Image Type	Captured Date
Tak SooYong	20120423_134745	Male	26	1985/11/	S SENSOR [25] S SENSOR [15] S SENSOR [34] P PANORAMA P PANORAMA P PANORAMA P PANORAMA S SENSOR [11]	2006/08/18 PM 05:27:46 2004/03/20 PM 01:54:24 2004/03/20 PM 01:54:24 2004/03/20 PM 01:54:24 2004/03/20 PM 01:18:08 2004/03/20 PM 01:14:26 2004/03/20 PM 01:14:26 2004/01/02 PM 07:42:48
	m					

2 Main Screen

2.1 Main Screen

Search (Date)

Patient Exp	olorer								
<u> </u>	UUTION FOR DENTAL								
Chart No.									
First Name									
Last Name									
Social ID									
Age/Gender									
Treatment									
Mobile									
Tel									
E-mail									
Search(Date)									

You are able to search patient information and images according to the type of image or type of associated patient treatment (Treatment, Implant, and Analysis).

A following window will appear when you press the **Search (Date)** button.

Ali		al Solution For Dental		
Panorama	Today			
Cephalo	Yesterday			
Intra-oral Sensor	3 days	Gunt		
Intra-oral Camera	Week	Search		
Ст	Month	Cancel		
Treatment	User	Cancel		

After selecting the date and the type of image you want to search, press the Search button.

If you click on **Treatment**, a sub-window will appear, as shown below.

Treatment						
	Item :	Treatment	~ ~	Item :	Treatment	~
		ОК	Cancel		Treatment Analysis Implant	

Select **Treatment, Analysis,** or **Implant**, and then press **OK**. Items appearing as Treatment, Analysis, and Implant can be corrected using the **Database** \rightarrow **Treatment Management** tool.

When selecting **Search (Date)** \rightarrow **User**, the following **Period** window will appear. After selecting the range of search dates, press **OK**.

From		10/0	06/20	08		То			10/0	06/20	08	
2008	Υ	>	<	10 N	4 🕥		2008	Υſ	>	<	101	мГ>
Sun Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4				1	2	3	4
5 🧿	7	8	9	10	11	5	Ô	7	8	9	10	11
12 13	14	15	16	17	18	12	13	14	15	16	17	18
19 20	21	22	23	24	25	19	20	21	22	23	24	25
<mark>26</mark> 27	28	29	30	31		26	27	28	29	30	31	
🤈 Today	/: 10	/06/3	2008			9 T	oday	: 10	/06/;	2008		

If you click on **Quick Search**, the field will expand. The user can select the search period using this function.





Using Search (Date), the user can search patients that fall under both 'Date' and 'Image' categories.

2.1 Main Screen

2.1.4 Thumbnail (Preview window)

If you select a patient from the **Patient List**, the application will show any associated images acquired for that patient, along with the date and time the images were first created.

The following figure displays a typical example after selecting a certain patient from the list.

BW, which is the abbreviation of Bitewing, will be displayed on the Bitewing image.



Click **Image View** on the Function Tab. If you click the image you want to be displayed from the images aligned on the **Thumbnail** window, the color surrounding the image will change, as shown in the picture below. If you drag and drop this onto the main window, you will see the full-size image.



2.1.5 Function Tab

Patient

The function tab consists of **Patient**, **Image View**, **Layouts** and **Consultation** sub-tabs as shown below.

Patient	Image View	Layouts	Consultation

The Patient tab is divided into Patient List and Image List windows.

Patient Image View	Layouts C	onsultation				
Patient List					Image List	
Patient Name	Chart No.	Gender	Age	Birthday	Image Type	Captured Date
Tak SooYong	20120423_14042	28 Male	25	1986/10/11		

When you click on the patient you want to treat from the **Patient List**, an **Image List** for that patient will be shown, along with a preview of images taken in the **Thumbnail** window above.

D10/04/26 PM 02:27:17 20	006/08/18 PM 05:27:46	2004/03/20	D PM 01:54:24	2004/03/20 PM 01:54:24	2004/03/20 PM 01:18:08	2004/03/20 PM 01:17:22
atient Image View	Layouts Con	sultation				
Patient List				Image I	_ist	
Patient Name	Chart No.	Gender	Age	Birthday Image Ty	pe	Captured Date
Tak SooYong	20120423_134745	Male	26 1	985/11/26 I CAME	ERA [12]	2010/04/26 PM 02:27:17
				S SENS	OR [25]	2006/08/18 PM 05:27:46
				S SENS	OR [15]	2004/03/20 PM 01:54:24
				S SENS	OR [34]	2004/03/20 PM 01:54:24
				P PANC	RAMA	2004/03/20 PM 01:18:08
				P PANC	RAMA	2004/03/20 PM 01:17:22
				PANC	RAMA	2004/03/20 PM 01:14:26
				P PANC	RAMA	2004/03/20 PM 01:14:26



If you click on an image file from the 'Image List', the corresponding image will be focused with purple color among many images on the 'Thumbnail' window. 2.1 Main Screen

Image view

Please refer to section 2.1.4 Thumbnail for view of images in Image view.



Layouts

Please refer to Chapter 8.10.

Consultation

In **Consultation** mode, you can view images from all sources (Intraoral, Pano, and Ceph). These images can be organized so as to easily explain the patient's condition during consultation.



The **Consultation** mode, double-clicking the image will change the **Function tab** into **Image View**, and you will be able to view the expanded image. If you click the image only once, all the images saved in that location can be viewed on Thumbnails.

2.2 Context Menu

If you click the image with your right mouse button, a **Context Menu** pop-up. The frequently used functions are grouped and can be used without using the Toolbar or Icons.

Select
Zoom In/Out
Move
Draw
Distance
Delete Overlay 🔹 🕨
Whitening •
Adjust 🕨
Recently implant 🔸
Initialize
Magnifier
Magnifier LE
Export E-mail
Memo
Exif Information
Modality
Modify Implant

3.1 File

3 General Operating Instructions

In this chapter, we will explains the File, Edit, and View menus.

3.1 File



3.1.1 Open

This function enables you to open any image in the formats of BMP, JPG, GIF, PNG, ICON, and TIFF in EasyDent for viewing and editing.

To open the existing file, click **File** \rightarrow **Open**. Then Open window will pop-up.

Open			? 🛛
Look in: 📔	N_Images	🔽 🔇 🌶	⊳ 🖽 ڬ
c2007031 c2007031 c2007031 c2007031	6_130101_0000 6_130101_0000t 6_130106_0000 6_130106_0000t 6_130058_0000 6_130058_0000t	i20070316_130104_0000 i20070316_130104_0000t i20070316_130105_0000t p20070316_130057_0000 p20070316_130057_0000t p20070316_130057_0000t p20070316_130057_0000t	p20070316_13 p20070316_13 p20070316_13 p20070316_13 p20070316_13 p20070316_13 p20070316_13 p20070316_13
<			>
File <u>n</u> ame:			<u>O</u> pen
Files of type:	All Image Files(*	.bmp; *.jpg; *.jpeg; *.gif; *.pn; 💙	Cancel
	🗹 Open as read	l-only	

Select the file and click **Open** button, and an image will appear on the **Image View** area.



The same image(s) will also be shown in the **Thumbnail** area, along with the filenames of the images.

3.1.2 Save As

Save as lets the user make a copy of the file in a different folder or make a copy with a different name and extension in the formats of BMP, JPG, GIF, PNG, ICON, AND TIFF.

In order to save the selected patient's image in the different file name or format, press **File** \rightarrow **Save as**, and the following window will appear. Choose the location in which you want to save file, and enter the file name and press **Save**.

Save As
Savejn: 🗀 N_Images 💽 🕜 🤣 📂 🖽 -
in c20070316_130106_0000 in c20070316_130106_0000t in p20070316_130057_0000t in p20070316_130057_0000t in p20070316_130057_0000t in p20070316_130059_0000t in p20070316_130059_0000t in p20070316_130059_0000t in p20070316_130103_0000t
File name: Save Save as type: Bitmap Files(".bmp) Cancel

Saved image files can be viewed without running EasyDent.

3.1.3 CT Save As

You can export / import the CT files and the Ez3D2009 project files in the following ways:

Exporting CT files

This is a function to save the selected CT images of the patient in CT files (*.zip) form into an external location (into a local path of the user's PC) other than in the EasyDent program.

In order to export the selected patient's CT image from EasyDent, click its **Thumbnail** image and click **File** \rightarrow **CT Save As**, and then a window will appear.

Select the directory (location) where you want to save the CT image, and then enter the file name and click **Save**.

Savejn: ն	CT Image	~	G	1	Þ	•	
sample1							
🗋 sample2							
sample3							
🔁 sample5							
🚞 sample6							
-īle <u>n</u> ame:						Save	1



CT images cannot be viewed and analyzed unless the 3D Viewer analysis program runs.

Importing a CT file

This function is accessible through C:\EasyDent4\DBUtill \rightarrow SaveToDB4.exe that is located at the sub folder of the EasyDent Program.

1. First, execute **SaveToDB4.exe**.

🕏 SaveToDB for EasyDent V4 (M	lulti-Language version) 🛛 🔲 🗆 🚺
Chart Number :	
2010-04-12	ting Date 오전 8:17:09
 File or Path ⊙ Path ○ CT File (*,ct) 	CT or Tomo OCT O Tomo
< Path of files >	
1	
	Save Close

2. Enter the chart No. of the patient, whose CT image file is to be imported, in the Chart Number input box.

asyDent V4 (Multi-Language version)	
11	

3. If you want to change the importing date, check the **Setting Date** box then enter the date you prefer. If the **Setting Date** box is left unchecked, the CT file will be imported based on the current date and time of your pc.

	;	Setting Date		
2008-01-10		✓ 오전	9:00:00	×

You can import both the DICOM File and the CT File through the SaveToDB.exe.
 In the case of DICOM file, select the folder where the DICOM files are located. On the other hand, select the CT file folder in the case of CT file.

 File or Path - ⊙ Path 	O CT File (∗.ct)	CT or Tomo	⊖ Tomo
File or Path	⊙ CT File (∗,ct)	CT or Tomo	O Tomo

5. Select the type of CT file to be imported from either **Tomo** or **CT**.

File or Path		CT or Tomo		
O Path	⊙CT File (∗,ct)	⊙CT	🔿 Tomo	

 Click the Save button. If the CT Import has been done successfully, a "Save Complete!" message appears.



The 'CT Import' function can be used to import images of an external clinic/hospital or to re-input the backup CT file (post backup).

Exporting an Ez3D2009 Project file

A Project File is a file of Ez3D2009 3D viewer. The **Export Project File** function will be applied automatically in compliance with the activation of **Export CT File** function.



The Export Project File function will be applied automatically in compliance with the activation of Export CT File. If there is a Project File that is related with a CT File, all the Project Files will be exported to the local path (directory) where the CT File is to be exported.

Importing an Ez3D2009 Project file

The **Import Project File** function enables you to save the **Ez3D2009 Project File** to the EasyDent DB. Follow the procedures below:

1. Execute C:\EasyDent4\DBUtill\ImportNPJDatas.exe.

2. Enter the chart No. of the patient, whose Project file is to be imported, in the Chart Number input box and then click the **Check** button.

😼 Import Ez3D2009 Proejct Data		<u> </u>
Chart Number	[Check

3. If the selected patient has a CT file, the CT files will be displayed. Select the **CT file** you wish to import. But if there is no CT file list, the **Project file** import will not be accessible.

Chart Number	1	Check
CT List		
Captured Date		

4. Click the file path '...' button and select the **Project File** that you wish to save into the EasyDent DB. Click the **Save To DB** button.

🔀 Import Ez3D	2009 Proejct Data	
Chart Number	1	Check
CT List		
Captured Date 2010, 02, 04 23:24	1:46	
File path of Ez30	D2009 Project File	
C:₩Documents	: and Settings₩Hong-Jae₩바탕 화면₩InsertFile_00,npj	
	Save To DB	Exit

3.1 File

5. If the file upload to the EasyDent DB has been done successfully, a "**Succeed! upload to DB**" message appears.



The 'Import Project Files' function is very useful when you want to save the modified Ez3D2009 Project file (using Ez3D2009 in any PC where EasyDent is not installed) to EasyDent.

3.1.4 Export to PACS Gateway

This function allows you to save selected images into a PACS server that is linked to an Infinity PACS Gateway (not available for CT images).

3.1.5 AnyChart

A direct link to the program AnyChart, a widely used electronic charting program in Korea

3.1.6 Analysis

EasyDent is linked with the Orthodontic analysis program chosen at the **Software for Analysis** portion of the **Help** \rightarrow **Configuration** \rightarrow **Program** tab to allow the direct use of the EzCeph or OrthoVision software programs.

3.1.7 EzCodi

EzCodi is directly linked as well. EzCodi is a patient consultation program used within Korea.

3.1.8 SMS

You can send an SMS to the patient.

3.1.9 Dental CT

Further details are in Chapter 5: Image Acquisition.

3.1.10 Panorama

Further details are in Chapter 5: Image Acquisition.

3.1.11 Cephalo

You can acquire Cephalometric images through the capturing program.

3.1.12 CR Scanner

Direct link to the EzTWAIN Software. The EzTWAIN software manual is provided separately.

3.1.13 Intraoral Sensor

Direct link to the EzX Software. The EzX software manual is provided separately.

3.1.14 Intraoral Camera

Direct link to the EzCam software. The EzCam software manual is provided separately.

3.1.15 Digital Camera

Linked to the EzCam software

3.1 File

3.1.16 DICOM Print

Further details are in Chapter 11: DICOM Print and Report.

3.1.17 Report

Further details are in Chapter 11: DICOM Print & Report.

3.1.18 Export to E-mail



You can email your image. Please select the image you wish to send through e-mail. If you click **File** \rightarrow **Export to E-Mail** or click the right mouse button and select **Export to E-Mail** from the context menu, a window will pop-up. You can verify the image you have selected along with a brief overview of the patient that will be attached to the e-mail.



After adding any necessary information, please enter the address of the receiving patient and then press **Send**.



You can use the 'Export to E-mail' function only if you have 'Outlook' installed and configured on your computer.

3.1.19 Acquire

To get an image from the TWAIN device, please select the source first.



TWAIN (Toolkit Without An Interesting Name)

This is an international standard related to digital input devices such as scanners and digital cameras. If the device and software are compatible with TWAIN, you can acquire images from it using EasyDent.

3.1.20 Select TWAIN Source

Set TWAIN device.

3.1.21 Save to DB (TWAIN)

Save scanned image to patient's DB.

3.1 File

3.1.22 Save As (TWAIN)

Save acquired images as a different filename.

3.1.23 Exit

Exit EasyDent.
3.2 Edit

3.2.1 Initialize



This is a function that can re-set all the changes made to the image. You may either click **Edit** \rightarrow **Initialize**, or **Initialize** on the toolbar. Images with Drawing, Measure, Implant, and Implant Crown overlays applied cannot be initialized using this function. In this case, you can press **Delete All** to remove all overlays applied to the image.

3.3 View



3.3.1 ToolBar

Click if you would like to create a **ToolBar** at the top of the main screen. The toolbar is a variety of frequently used tools bundled together to allow quick execution of common tasks.

3.3.2 StatusBar

Click if you would like to create a StatusBar at the bottom of the main screen.

3.3.3 Overlay

This enables **Drawing** and **Measurement** results to be visible or hidden from the screen. Check it if you would like to see their results on the image. Otherwise, uncheck **Overlay** to hide the result.

3.3.4 Implant

Click if you would like to see the **Implant** on top of the image. If you do not click **Implant**, the use of Implant overlays will not be visible on the image.

3.3.5 Information



Click **Information** whenever you would want to show patient information (such as patient's name and gender, date captured, Kvp, mA, DAP, etc.) on the image. With **View** \rightarrow **Information** \rightarrow **Information of Image** selected, you may choose where to locate the information shown in the submenus.



This mode can be seen in the Extended Screen and full screen modes.

For example, if you choose **Left Above**, the patient information will be displayed at the upper left corner of the screen.



The DAP value, with its $dGy \times cm^2$ unit, is displayed only for the Panoramic and Cephalometric images, not on CT images.



If you select Annotation and Thumbnail of TOOTH POS on the single image view screen (in case of Sensor image), TOOTH POS: BW-RM will be shown on the Bitewing image.



3.3.6 Exif Information

You can see the image information of the digital camera.

3.3.7 Memo



You can leave a simple memo on the image.

Choose the image you wish to insert a memo in.

If you click **View** \rightarrow **Memo** or if you click the right mouse button then choose **Memo** at the Context menu, the memo window will appear. You may record the contents you wish to input and press the **OK** button.



A memo will be inserted at the upper left corner of the image. Double-clicking the memo icon will

allow the user to check and change the contents of the memo.



After you select a patient from the **Patient List** window and locate the image in the **Image View** window, you are able to check the contents of the memo in **Patient Information**.

Patient Exp	lorer					
	P					
Chart No.	20081001_0					
First Name	VATECH					
Last Name	E-WOO					
Social ID	950101- ^{*****}					
Age/Gender	13 / Male					
Treatment Treatment						
Mobile						
Tel						
E-mail	@					
Search(Date)						
Total (Images)):10					
Date : 02/23/2	007 13:46:10					
Kvp/mA : 0 / (ו					
Memo : Implai	nt					

4 Database Management

In this chapter, an overall explanation of patient, image, and treatment management for EasyDent will be given, as well as direction on how to import and export data and files.

Patient Management manages search, registration, and amendment of patient information. Image Management deals with modifying and moving of saved images. Treatment Management deals with setting and modifying of the treatment type for patients.

Database Management provides different types of user authority in accordance with the grades of EasyDent users, as shown on the table below. This is equally applied to Patient Management (patient information modification and deletion), Image Management, and Exportation Data.

	User Account	Patient Information Management					
Classification	Management	Search (Reference)	Register	Modify	Delete		
Admin (Grade 1)	0	0	0	0	0		
Doctor Type-A (Grade 2)		0	0	0	0		
Doctor Type-B (Grade 3)		0	0	0			
Staff Type-A (Grade 4)		0	0	0			
Staff Type-B (Grade 5)		0	0				

Table 1: EasyDent user's grade and authority

If you log in your user account by clicking **Change Login Account**, you will be able to manage or erase patients' information and images depending on the authority granted to you.

But a notice message will pop-up if you try to modify or delete a patient's information —with no authority to do. Try to log in another user account that will allow you to modify or delete information.

When you try to manipulate the **Database Management** without logging in your user account, a window will appear as shown below.

EasyDer	nt V4 🔀
♪	No user login detected. Do you want to input your login information?
	OK Cancel

Click the **OK** button.

Input your user account and password then click **OK**. A window, where you can manage or delete patients' information and images, will appear.

	EasyDent
Login For EasyDent	User ID :
R	Password :
-	OK Cancel

4.1 Patient Management

4.1 Patient Management



If you click **Database** \rightarrow **Patient** from the menu bar of the main screen, the following window will pop-up.

			-Patient Information -		
Chart No,	Patient N	Social ID	Chart No, :	_	320×240
			Patient Name :		
			Social ID :		
			Gender :		
			Age :		Picture
			Birthday :		
			Address1 :		
			Address2 :		
			E-mail :		
			Tel :		
			Mobile :		
				<u> </u>	
Search	n New	• М	odify Delete	All	Reset

4.1.1 Patient Search

If you click the **Search** button at **Database** \rightarrow **Patient** \rightarrow **Patient Management**, a search window will appear.

Search		×
Chart No :		
First Name :		
Last Name :		
Social ID :		
	Search	Cancel

It is possible to search the patient by filling in just any one field among Chart No., First Name, Last Name, and Social ID.

4.1 Patient Management



4.1.2 Patient Registration



If you click the **New** button at **Database** \rightarrow **Patient** \rightarrow **Patient Management**, or if you click on the **PATIENT** button at the toolbar, an Add Patient dialogue box will pop-up. To add a patient, a user first must be registered through the User Account Manager and then log in user account. For more details, refer to **4.7 User Account Manager**.

* Chart No. :	20110120_150621 Auto No.
First Name :	
Last Name :	
Social ID :	
Birthday :	1 🔽 1 💌 2011 💌
Gender :	Male V Treatment: Treatment V
Address1 :	
Address2 :	
E-mail :	@
Tel :	Mobile :
Doctor :	~

Entering the Chart No

If you wish to enter the Chart No., you may press **Recently** to view the most recent Chart No. entered into EasyDent. Check the **Auto No.** and then click the **Auto** button, and a Chart No. will automatically be created in the following format; YYYYMMDD_HHMMSS (Ex. 20080909_175325).

4 Database Management

4.1 Patient Management

* Chart No. :	20090501_000001 Recently Auto No.
* First Name :	VATECH
* Last Name :	E-WOO
Social ID :	950101-1234567
Birthday :	1 • 1 • 1995 •
Gender :	Male 🔽 Treatment: Treatment 💌
Address1 :	473-4, Bora-dong, Giheung-gu, Yongin-si, Gyeonggi-do
Address2 :	
E-mail :	•
Tel :	Mobile :
Doctor :	×



Chart No., First Name, and Last Name are the required fields to be filled in order to register a patient successfully.



When you register a patient, enter the chart number with no spaces. If you paste the chart number to the edit box, any space between the numbers will be removed automatically.

After entering the other necessary items, please press **Add**. After registration of the patient, you will be able to check the information at the **Patient Information**.

				Treatment Management Patient Information
	Patient N VATECH			Chart No. : 20081001_000001 Patient Name : VATECH E-WOO Social ID : 950101-1234567 Gender : Male Age : 13 Birthday : 01/01/1995 Address1 : 473-4, Bora-dong, Giheung-gu, Yongin-s Address2 : E-mail : @ Tel : Mobile :
Search	Ne	w (Modify	Delete All Reset

4.1 Patient Management

Inserting a photo into Patient Information

If you click on the **Picture** button at the right side of the **Patient Information**, an **Open** window will pop-up. Please select a file photo and then click **Open**.



4.1 Patient Management

4.1.3 Modifying Patient Information

In the case of modifying the patient information—Name, Sex, Address and etc— that was already registered, please find the patient using the **Search** button.

Chart No.	Patient Name ValECH ==w00	Social ID Social ID 950101-123456	Treatment Management Patient Information Chart No, : 20081001_000001 Patient Name : VATECH E-WOO Social ID : 950101-1234567 Gender : Male Age : 13 Birthday : 01/01/1995 Address1 : 473-4, Bora-dong, Giheung-gu, Yongin-si, Address2 : E-mail : @
Search	New	Modify	Tel : Mobile : Delete All Reset

After clicking on the patient information that you wish to modify, click the **Modify** button, and the following dialogue box will appear. After modification, press the **Modify** button to complete the process.

Chart No. :	20081001_000001
First Name :	VATECH
*Last Name :	E-WOO
Social ID :	950101-1234567
Birthday :	1 💌 1 💌 1995 💌
Gender :	Male V Treatment : Treatment
Address1 :	473-4, Bora-dong, Giheung-gu, Youngin-si, Gyeonggi-do
Address2 :	
E-mail :	•
Tel :	Mobile :



4.1.4 Deleting Patient Information

Find the patient information that you wish to delete by clicking the **Search** button, and then clicking the **Delete** button.

Chart No.			- Patient Information
20081401-0	Valechie-wuo	Social ID 990101-123496	Patient Information 320x240 Chart No, : 20081001_000001 320x240 Patient Name : VATECH E-WOO Social ID : 950101-1234567 Gender : Male Age : 13 Birthday : 01/01/1995 Picture Address1 : 473-4, Bora-dong, Giheung-gu, Yongin-si, Address2 : E-mail : @ Tel : Mobile :
<		>	
Search	New	Modify	Delete All Reset

You are asked to confirm the deletion request.

EasyDe	ent V4
⚠	Warning! are you sure to delete the selected patient?
	OK Cancel

Click the **OK** button.



	1.	If you need to delete an entire patient from your database, you
		must first delete all the saved images for that specific patient. If you do not, the images will remain with the chart number.
CAUTION	2.	It is recommended that you do not use the same Chart No. for different patients.

4.1 Patient Management

4.1.5 All (Whole Patient List)

Using the All button, you can pull up a list of all patients in your EasyDent database.

Database	
Patient Management Image Management Export Data	Treatment Management
Chart No. Patient N Social ID 2000901_0 Park Eun 20000100000000000000000000000000000000	Patient Information 320x240 Chart No, : Patient Name : Social ID : Gender : Age : Picture Birthday : Address1 : Address2 : E-mail : Tel : Mobile :
Search New Modify	Delete All Reset
	Close

4.1.6 Reset

Reset will restore the **Patient Management** to initial status.

You can delete the image of an existing patient or transfer an image to another patient.

Data	base
e	Patient
D	Image
1	Export
1	Import Files
	Import Splite Window
	User Account Manager
	Change Login Account

4.2.1 Image Transfer

If needed, you can transfer a patient's image to another patient database.

To get the database window, click **Database** \rightarrow **Image** \rightarrow **Image Management** in sequence.

atient Manageme	nt Image Management E	xport Data Treatment M	lanagement		
Chart	No :	Search	Move		
Last Nar	me :		Delete	lete	
Selected:					
Chart No,	Patient Name	Image Type	Captured Date		
		1			
		<		>	

Enter either the Chart No. or the Last Name and then click **Search**, and the search result for patient information will be listed up, as follows.

Chart N	0 : 20081001_000001	Search	Move	
Last Nam	e: E-WOO	Jean	Delete	
Selected: 20	0081001_0000 VATECH E	E-V SENSOR	02/23/2006 AM 10:30:58	13 1
Chart No. 20081001_000001	Patient Name VATECH E-WOO	Image Type SENSOR CEPHALO SENSOR SENSOR PANORAMA SENSOR SENSOR SENSOR SENSOR	Captured Date 08/10/2006 PM 05 05/17/2006 PM 05 05/17/2006 PM 05 05/17/2006 PM 02 05/02/2006 AM 12 02/23/2006 AM 10 02/23/2006 AM 10 02/2006 A	57:46 34:00 27:30 47:54 00:00 31:56 31:28 30:58
		CEPHALO PANORAMA SENSOR SENSOR SENSOR CEPHALO	07/09/2004 AM 12 06/23/2004 PM 01 03/20/2004 PM 01 03/20/2004 PM 01 03/20/2004 PM 01 03/20/2004 PM 01	:52:40 :54:24 :54:18

Select the image of the patient you wish to transfer, and then click **Move**. A **Move** window will pop up.

Move
Insert New Chart No.
Move Cancel

Enter the new Chart No. of the patient, and then click the **Move** button. When the image of the selected patient is transferred to the designated Chart No., a window will appear. Press **OK** and the move will be complete.

4.2.2 Deleting an Image



If needed, you are able to delete images saved.

At the menu bar, click the following: **Database** \rightarrow **Image** \rightarrow **Image Management** and a **Database** window will pop-up.

allent Manageme		Export Data Treatment Man	agement	
Chart	No :	Search	Move	
Last Nar	me :	Search	Delete	
Selected:				
Chart No,	Patient Name	Image Type	Captured ()ate
		<		>

Enter either the Chart No. or the Last Name and then press **Search** and the search result for patient images will be listed up.

atient Management	Image Management	Export Data Treatment Man	agement	
Chart No	0 : 20081001_000001	Search	Move	
Last Name: E-WOO			Delete	
Selected: 20	0081001_0000 VATECH E	E-V SENSOR	02/23/2006 AM 10:30:58	13 1
Chart No, 20081001_000001	Patient Name VATECH E-WOO	Image Type SENSOR CEPHALO SENSOR PANORAMA SENSOR SENSOR SENSOR	Captured Date 08/10/2006 PM 04: 07/11/2006 PM 05: 05/17/2006 PM 05: 05/17/2006 PM 06: 02/23/2006 AM 12: 02/23/2006 AM 10: 02/23/2006 AM 10:	57:46 34:00 27:30 47:54 00:00 31:56 31:58
		CEMPHALO PANORAMA SENSOR SENSOR SENSOR CEPHALO	09/09/2004 PM 01 07/09/2004 PM 01 06/23/2004 PM 01 04/03/2004 PM 01 03/20/2004 PM 01 03/20/2004 PM 01	01:24 52:40 54:24 54:18

Click the image that you want to delete and then press the **delete** button.

A pop-up window will ask for your confirmation of the deletion request, as shown below.

Delete	×
The selected image shall be delete [Delete Selected Image], the only or shall be deleted. If you select [Dele shall be deleted.	ne selected image
Delete Selected Image	Cancel
Delete All	



Please check whether the image you selected is indeed the image you wish to delete.
 It is advised that you delete images using the 'Delete Selected Image' button. The 'Delete All' deletes all images saved for that specific patient at a single click.

Upon deleting the selected image, a box that notifies you of the deletion will appear. Click the **OK**.



4.3 Treatment Management

This shows on the chart the kinds of treatment that were done to the patient by the user. The treatment is composed of three components: Treatment, Analysis, and Implant. According to the needs of the user, this portion can be modified, deleted, or added.

Data	base
e h	Patient
D	Image
2	Export
1	Import Files
	Import Splite Window
	User Account Manager
	Change Login Account

There is no icon within the toolbar that runs the **Treatment Management**. In order to run this, you will need to click on the **Database** and click the **Treatment Management** tab.

- Trea	atment			Sele	ected	
Vo	Code ID	Treatment	>>	N₀ 1 2 3 	Code ID 008000 008001 008002	Treatment Treatment Analysis Implant
	de ID : tment : JdMor	lífy) Delete			p Dov	~

4.3 Treatment Management

Add: User can add the treatment of choice. For example, if you want to add **Dental Bleaching** to the treatment, you can enter **Dental Bleaching** and press **Add**. Then you can see that the treatment was added.

No	Code ID 008004	Treatment Dental Bleaching	>>	No 1 2 3	Code ID 008000 008001 008002	Treatment Treatment Analysis Implant
			<< <<			
_	de ID : ment : Dental I	Bleaching			p Dov	



The Code ID cannot be inserted or changed by the user.

Modify: When treatment information entered incorrectly, it is possible to change it. As shown below, you may change **Dental Bleaching** by selecting **Dental Bleaching** from the treatment list. You can modify the contents at the **Treatment** and click **Modify**.

	itment	-			cted	
10	Code ID 008004	Treatment Dental Bleaching	>>	No 1 2 3	Code ID 008000 008001 008002	Treatment Treatment Analysis Implant
			<< <<			
Co	de ID : 008004					
Treat	ment : Dental I	Bleaching				

4.3 Treatment Management

Delete: If you want to delete a Treatment, select the item you want to delete, as shown above, and press delete.

EasyD	ent V4 🛛 🔀
⚠	Are you sure to delete selected item?
	OK Cancel

Once you have completed the addition or modification of **Treatment**, you will need to move it to the selected columns in order to use it.

When the number of treatment is one item, press ' \rightarrow ' when many, ' \rightarrow '.

At the **Selected** area, you can use the **UP** and **DOWN** buttons to rearrange the order of the appearance of treatment.

4.4 Export Data

4.4 Export Data

You can export image information of patient to MS's Excel.



If you click **Database** \rightarrow **Export Data** from the menu bar at the main screen, a database window will appear as shown below.

✓ User Setting Period OToday OWeek OMonth User From 2008-09-25 ~ To 2008-09-25 Export form < Type > < Mode > Form: All ✓ Type > < All ✓ All 	Selected a patient Option Recently Sort 1 Sort 2	
Path - Path : C:WEasyDent4WEdpV4WDocWS Status : Export	iendOut.csv >>	

1. User Setting: The user can specify the storage period within which image(s) are to be exported.

Today: Select images that were taken within the day.

Week: Select images taken within a week.

Month: Select images taken within a month.

User: The user can set the period. Also, the user can select the type of images to be exported.

- Being Selected a patient clicked, it will export the most recent images for the selected patient into Excel file.
- 3. **Path**: Shows the path where the exported patient data will be saved. The path can be changed by the user. While the image information is being exported, the status in progress will be shown.

4.4 Export Data

Patient Management Image Management Export Data Tr	eatment Management
✓ User Setting ✓ Today Week ✓ Month ○ User From 2008-11-05 ✓ Export form < To 2008-11-05 ✓ To 2008-11-05 ✓ Form: All ✓ Path All Yeath Yeath Export	Cov

Itient Management Image Management Export Data Tr User Setting Period Today Week Monch User From 2006-08-25 V To 2008-09-25	eatment Management
· · · ·	ed image information

Click the **OK** button to export the patient's image data. In order to verify the result, browse the directory to the designated path. The default path is **C:\EasyDent4\EdpV4\Doc**.

In that directory, double-click the **SendOut.xls** file to examine the internal contents.

The following figure shows the typical example of the inside contents of the exported file.

		'User Im ag	e List		
Panorar	ma X-ray	: 0			
Intra-Or	ral X-ray	: 1			
Intra-Or	ral Cam era	: 0			
Cephalo	o X-ray	: 0			
CT (TON	/10) X-ray	: 0			
Digital (Cam era	: 0			
No	Chart No	Patient's N	Birthday	Im age Typ	Date
'					
'1	20081001	'E-W00	1995-01-	SENSOR	'09/25/2008 AM 11:01:27

4.5 Import Files

4.5 Import Files

If needed, you are able to import image files from outside sources into a selected patient's file.

Data	base
ů,	Patient
B	Image
2	Export
P	Import Files
	Import Splite Window
	User Account Manager
	Change Login Account

If you choose **Database** \rightarrow **Import Files** from the menu at the top of the main screen, the **Open** window will appear.

pen				?
Look jn: 🛅	1,Pano	✓ O	Ø 🖻 🛄 -	
Pano_Sample	Pano_Sample0	Pano_Sample1	Pano_Sample2	
Pano_Sample3	Pano_Sample4	Pano_Sample5	Pano_Sample6	
			(AF)	
Pano_Sample7	Pano_Sample8	Pano_Sample9	Pano_Sample10	
File <u>n</u> ame:			<u>Open</u>	
Files of type:	All Image Files(*,bmp)	*,jpg; *,jpeg; *,gif; *	Cancel	

Chart No :	20081001_000001	Name : E-WOO		_	1
Count :	1 EA	Result :	0/0	Total	
File Name			Image Type		1
► C:\Docu	ments and Settings₩	Administrator₩Desktop₩Ea			
_					
1.000					
<			>		Panorama
					Panorama

Select the image you want to import and then click **Open** to open the **Save to DB** window.

- 1. **Information**: Displays the Chart No. and the name of the patient associated with the image you want to save.
- 2. File: You can check the path of the image file to be import.

When you double-click the file, a **Date Time** window will pop-up as shown below, and the user may change the date and time. (By default, the Date and Time are synced to the user's computer.)

ave to DB Information Chart No : 20	081001_0000)1 Name : E-WO	D		
Count :		Result	:	0/0	Total
File Name	DOL		Image Type	Date	
C:₩Docume	nts and Setting	gs₩Administrator₩		08/10/2006 1	
DateTime				E	3
Date 09/29/2008	✓ 3:07:	Time 19 PM	ОК	Cancel	
<				>	
	norama		Save		ancel

Once the Date and Time had been modified, press the \mathbf{OK} button or if not, press $\mathbf{Cancel}.$



If there are no modifications on the Date and Time, the save date and time are set as the creation date and time of the file. 4.5 Import Files

3. **Type**: select Panorama, Cephalometric, Intraoral Sensor, or Intraoral Camera type of image from the pull-down list. For a Cephalometric image, you are required to select both the Direction and the Modality.

Cephalo Direction O Frontal O Lateral	Intra-oral X-Ray	or com	C I	EDCBA	ABCD	E
	Camera	×	and the second second	514131211		the second second second
Modality			Bite-Win	igs		
Lat_Film			RM	RI	ОЦ	LM
			4847464	544 43 42 41	31 32 33 34	35 36 37 38
			l	EDCBA	ABCD	E

For Intraoral Sensors and Intraoral Cameras, you need to select the device and the location of the teeth. You can also set the Bite-Wings.

Cephalo Direction	Intra-oral X-Ray & Came Device	00000 E D C B A	ABCD	E
Modality	Intra-oral Sens 👻	1817161514131211 0000000 Bite-Wings	0000	
Lat_Film 💙		ORM ORI		
		EDCBA		

By clicking the **Save** button; the chosen image will be saved at the file of the specified patient.



4.6 Import Split Window

This allows the user to save just the patient image only for viewing convenience.

Data	base	
÷.	Patient	
e	Image	
1	Export	
1	Import Files	
	Import Splite Window	-
	User Account Manager	Firs
	Change Login Account	SCREENSHOT

Select the patient file, and locate the image you wish to save on the image View.

You can either click **Database** \rightarrow **Import Split Window** on the menu bar, or click the **SCREENSHOT** button on the toolbar. Press **OK** button when the pop-up window appears.

If you double-click the Patient List, you will be able to check the saved images in the Thumbnail window.



If you click on the SCREENSHOT button at the toolbar, Patient, Image View, Layouts, and Consultation tab screens will capture and save on the database.

4.7 User Account Manager



You can register, edit, or delete a user account. On the menu bar, click Database → User Account

Manager.

	EasyDent
Login For EasyDent	User ID :
RO	admin
1.	Password :
	OK Cancel

Enter the initial setup data (ID: Admin / Password: 0000), then click OK.

An **Account Manager for EasyDent4** window where you can manage user accounts will appear. Note that each field is case-insensitive.

Account Mana	ger for EasyDent4				
List of the use				ALL	
ID	Name	Duty	Date of Registration		
				Registration	- 2
				Edit	-:
				Delete	<u> </u>
				Log Data	<u> </u>
				Close	

- 1. ALL: All users will be shown on the list.
- 2. **Registration**: Used for user registration.
- 3. Edit: Used for modifying user information.
- 4. **Delete**: Used for deleting user information.
- 5. Log Data: shows the history of modification and/or deletion of users.

ALL

When you click the ALL button, you can see all the users on the list.

ID	Name	Duty	Date of Registration	ALL
Admin Administrator 2 3	VATECH VATECH 2 3	Admin Admin Doctor	2009-03-23 04:03:02 2009-05-07 09:49:22 2009-05-07 09:51:02	Registration
3	3	Doctor	2009-05-07 09:51:36	Edit
				Delete
				Log Data

Registration

Click the **Registration** button to show a registration window, where you can register a new user account.

*ID				
*Password				
*Re-enter Password				
*Duty				🚩
*Authority	Managing Search	g Account	Modify	Delete
*Name				
SSID				
Birthday	1900-01-0	1		~
Gender	⊖ Male	○ Female		
Address				
E-mail				
Telephone				
Mobile phone				
Description				-
				\sim



Items beginning with asterisk (*) in the above dialogue box are required fields to be entered.

Password must be at least 4 characters.

Duty is classified into three levels. Refer to <Table1: EasyDent User's Grade and Authority>

Duty \rightarrow **Admin:** the full authority to manage account, search, add, modify, and delete information is given at this level.

*Duty	Admin		~
*Authority	Managing Account	Modify	✓ Delete

Duty \rightarrow **Doctor:** the authority to search, add, and modify information is given at this level by default. But the extra authority to delete information may be optionally given.

*Duty	Doctor	*
*Authority	│ Managing Account │ ✓ Search │ ✓ Add │ ✓ Modify	☑ Delete

Duty \rightarrow **Staff:** the authority to search and add information is given at this level by default.

But the extra authority to modify information is optionally given. However, the staff doesn't have authority to *delete* information.

*Duty	Staff		*
*Authority	│ Managing Account ✓ Search ✓ Add	Modify	Delete

Edit

On the **List of Users**, select a user then click **Edit** button or double click the user (information) and a Modify window will appear.

*ID	Administrator	
*Password	••••	
*Re-enter Passworc	••••	
*Duty	Admin	`
*Authority	Managing Account Search Add Modify	🗹 Delete
*Name	VATECH	
SSID		
Birthday	1900-01-01	×
Gender	○ Male	
Address		
E-mail		
Telephone		
Mobile phone		
Description		1
		~

You can modify any information fields of the user except for the ID.

You should enter at least 4 characters of the Password to modify user account information.

Delete

Select a user from the list, and then click the **Delete** button so you can delete the user's information.

ID	Name	Duty	Date of Registration	ALL
Admin Administrator	VATECH	Admin Admin	2009-03-23 04:03:02 2009-05-07 09:49:22	
2	VATECH 2	Doctor	2009-05-07 09:51:02	Registration
3	3	Doctor	2009-05-07 09:51:36	
				Edit
				Delete
				Log Data
				-

Click **Yes** to confirm deletion of the user's information.



Log Data

When you click the **Log Data** button after selecting a user on the List, a Log Data window will appear showing the user's work diary. Click a particular work data on the **Log Data** window so you can verify the user's ID and the login/logout time at the bottom of the window.



4.8 Change Login Account

4.8 Change Login Account



The user account can be changed through the **Change Login Account**.

If you click **Database** \rightarrow **Change Login Account**, a login dialog window will appear. Enter the user's ID and Password.

	EasyDent
Login For EasyDent	User ID :
	admin
19	Password :
The second	
	OK Cancel

You can verify the current user's ID and Duty at status bar located at the lower left side of the screen.

Login ID	: Admin	min (Administrator)		
	\checkmark	\rightarrow		
	ID	Duty Authority		

If you have not changed the user account through **Change Login Account** or if you have not closed the EasyDent Program, the initially set user account will be kept as it is.

5 Image Acquisition

This chapter explains on how to acquire images from PANO, CEPHALO and CT equipment through EasyDent software.



The equipment and the computer with EasyDent installed need to be linked prior to using this function.

5.1 Panorama

This is used to acquire the panoramic images from equipment. With the equipment and the computer connected, you can click the **PANO** from the main screen of EasyDent or **Panorama** in File menu to call the imaging software (GUI).



To acquire the image:

- A. Select the patient from the **Patient Information** at the left of the main screen.
- B. You may either click **Panorama** from the menu bar on the main screen, or click the **PANO** button on the toolbar.



Although each of the equipments has its unique imaging software, the following imaging software for thePaX-Uni3D is picked as a typical example for explanation.



C. At the last stage of image acquisition, you are asked whether you want to save the image taken. Press the **OK** button so that the image will be saved under the selected patient's file.



D. After acquiring the image, the screen will return to the main screen of EasyDent, and by selecting the same patient from the **Patient List**, you can view the acquired image.

5.2 Dental CT

5.2 Dental CT

This function is used to acquire images from dental CT equipment. With the equipment and the computer linked, pressing the **Dental CT** button will run the image acquisition program.

File				
	6	Open		
(H	Save As		
		CT Save As	•	
		Export to PACS Gateway	(Infinitt)	
	<u>ک</u>	AnyChart		
	66	Analysis		
		EzCodi		
		SMS		
	ø	Dental CT		
	â	Panorama		
		Cephalo		
		CR Scanner		
2	Ъ-	Intra-oral Sensor (Captur	re)	
	2	Intra-oral Camera		
	6	Digital Camera		
		Report C	trl+P, Ctrl+R	
		Report (Screen)		
	Ę	Export to E-mail		
		Acquire		
		Select TWAIN Source		
		Save to DB	(TWAIN)	0000
		Save As	(TWAIN)	000
	•7	Exit		DENTAL CT

- A. Select the patient from the **Patient Information** on the left side of the main screen.
- B. Click File \rightarrow Dental CT at the menu bar or the DENTAL CT button at the toolbar.

Then the following imaging software's main screen will be displayed.



Although each of the equipments has its unique imaging software, the following imaging software for the PaX-Zenith3D is picked as a typical example for explanation.


C. At the last stage of the acquisition of images, you are asked whether you want to save the image taken. Press the **OK** button so that the images will be saved under the selected patient's file and you will be able to access the image on EasyDent.



5.2 Dental CT



D. After acquiring the images, the screen will return to the main screen of EasyDent, and by selecting the same patient from the **Patient List**, you can view the acquired images.

When an image from the Thumbnail on EasyDent is clicked, it will be read by the 3D Viewer program (Ez3D2009), where you can view it.



CT image viewed on the 3D viewer

Check whether the HASP keys for the 3D Viewers—Ez3D2009 or Ez3D are inserted in the USB ports of the computer before viewing image. Since the CT image *can't* be displayed on EasyDent, it is transferred to the 3D viewer which is interfaced with EasyDent internally.

6 Save To DB

This chapter will explain the method of importing and saving a CT image to your patient database.

6.1 Save to DB

This function is used when you want to save a CT image to a selected patient's file.



Double-click the file C:\EasyDent4\DBUtill\SaveToDB4.

You may create shortcut to the above subdirectory to facilitate easy access to that application. To do this, go to the 'SaveToDB4' and click the right button on it and select 'Create Shortcut' from the pulldown list. Move the newly created file to the desired destination, such as another folder or the desktop.

The SaveToDB for EasyDent V4 window will appear.

	🐳 SaveToDB for EasyDent V4 (Mu	ılti-Language version) 🛛 🔲 🗙	
1 —	Chart Number :		
2 —	09/29/2008	ng Date	
3 —	 File or Path O Path ○ CT File (★,ct) 	CT or Tomo ⊙CT ◯ Tomo	- 4
5 —	< Path of files >		
		Save Close	

- 1. Chart Number: a field for the Chart No. of the patient whose CT image file you want to save.
- 2. Setting Date: a field to specify the date and time of change.
- File or Path: If the CT image you want to save is in .zip form or a folder, choose Path. If the CT image file is a CT File (*.ct), choose CT File (*.ct).

6.1 Save to DB

- 4. **CT or TOMO**: Choose whether the image is a type of CT or TOMO.
- 5. **Path of files**: Set the path through which you can read the CT image files.

When these steps have been completed, click the **Save** button. Then the progress bar will move, as shown below.

SaveToDB for EasyDent V4 (M	ulti-Language ve	ersion) 📃 🗖
Chart Number : 20081001_000001		
09/29/2008	ing Date 12:13:54 PM	×
● File or Path ● Path ● CT File (*,ct)	CT or Tomo	🔿 Tomo
< Path of files >		
D:₩image₩Sample images₩CT Ima	ge₩sample1	
		• • • • • •
	Save	Close

Once it is saved, a small pop-up window will appear with the message **Save Complete!** Then click **OK**.

	Setting Date	
09/29/2008	✓ 12:13:54 PM	\$
File or Path • Path • CT • Path of files	Fil OK	⊖ Tomo
D:₩image₩Sample ir	nages₩CT Image₩sample1	

If you want to import additional CT images, use the same method. If not, click Close.

If you double-click the patient's name from the **Patient List**, you will be able to check that the CT image has been saved on the **Image List** and on the **Thumbnail**.

e Edit View Database Dra	w Measure Image	Tool Implant Window	Help	Arrest arrest				
A ITENT TSFD UNDOW MAGE	BRIGHT CONTRAST GAM	A ZOOM MAGNIFIER REPORT	DRAWING MERSURE IMPLA	NT CROWN WHITE	ING SCREENSHOT MOVE	SELECT NITIALIZE		
NOVCEPH LIGA CATERA DENTAL CT Patient Explorer			and t				AT.)	
	2012/04/23 PM 02:51	08 2010/04/26 PM 02:27:17	2006/08/18 PM 05:27:46	2004/03/20 PM	1 01:54:24 2004/03/20	PM 01:54:24 20	04/03/20 PM 01:18:08	2004/03/20 PM
	•		III					
	Patient Image	View Layouts C	onsultation					
	Patient List				Image List			
	Patient Name	Chart No.	Gender Age	Birthday	Image Type		Captured D	ate
Chart No. 20120423 🔺	Tak SooYong	20120423_13474	15 Male 26	1985/11/26	т ст		2012/04/23 PM	02:51:08
First Name Tak					I CAMERA [12]		2010/04/26 PM	02:27:17
Last Name SooYong					S SENSOR [25]		2006/08/18 PM	05:27:46
Social ID 1123123**					S SENSOR [15]		2004/03/20 PM	01:54:24
Age/Gender 26 / Male					S SENSOR [34]		2004/03/20 PM	01:54:24
Treatment Treatment					P PANORAMA		2004/03/20 PM	01:18:08
Mobile					PANORAMA		2004/03/20 PM	01:17:22
Tel +					P PANORAMA		2004/03/20 PM	01:14:26
					PANORAMA		2004/03/20 PM	01:14:26
Search(Date)					8 SENSOR [11]		2004/01/02 PM	07:42:48
Fotal (Images) : 10								
	Today Captured Lis	t						
	Patient Name	Chart No.	Birthday		Patient Name	Chart No.	Birth	iday

7 Image Processing

This chapter will explain the method of drawing, measuring and use of imaging tools for patient images and the configuration of image settings.

7.1 Drawing Tools

These are tools that help draw various lines and figures on the patient's image.

			4 Viewer							
Eile	<u>E</u> dit	<u>V</u> iew	Data <u>b</u> ase	<u>D</u> raw	<u>M</u> easure	Im <u>a</u> ge	<u>T</u> ool	<u>I</u> mplant	<u>W</u> indow	<u>H</u> elp

7.1.1 Free Draw

This allows the user to draw freely on the image.



Click **Draw** \rightarrow **Free Draw** on the menu bar at the top of the EasyDent Viewer window, or click on the **DRAWING** icon on the toolbar. Then, draw freely on the image.



7.1.2 Line

This allows the user to draw straight lines on the image.



To draw a line, click $Draw \rightarrow Line$. Click the left button of the mouse once at the start point. After dragging it, click again at the end point. Then the line segment between two points is drawn.



7.1 Drawing Tools

7.1.3 Poly-Line

This allows the user to draw continuous lines on the image.

<u>D</u> ra	W	
Q	Free Draw	
\mathbf{i}	Line	
~/	Poly-Line	
	Rectangle	
\bigcirc	Ellipse	
	Color	۲
	Style	×
- S	Delete All	

Drawing a Poly-Line

To draw a poly-line, click **Draw** \rightarrow **Poly-Line**. Then click the mouse at the start point, followed by clicks at certain points, and then *double-click* the mouse at the end point.

If n points are clicked between start and end points, n + 1 line sements are drawn.



Moving a Poly-Line

The poly-line drawn can be moved to a desired position. To move it, do follow the following steps.

- A. If a Poly-Line drawn on the image is clicked, using the **Select** button on the toolbar, all the vertexes transforms into a square shape.
- B. At this stage, by clicking and dragging the Poly-Line, you can move it to a desired location.



Modifying a Poly-Line

- A. Click the vertex of part you would like to modify.
- B. Click and drag the vertex to a desired position, and you will see that the shape of two line segments containing a common vertex changes, as shown below.



7.1 Drawing Tools

7.1.4 Rectangle

This allows the user to draw a rectangular (square) shape on the image.



Click **Draw** \rightarrow **Rectangle** on the menu bar at the top of the main screen, and then draw any rectangular shape on the image as you would like.



7.1.5 Ellipse

This allows the user to draw an elliptical shape on the image.



Click on $Draw \rightarrow Ellipse$, then draw an elliptical shape on the image as you would like.



7.1 Drawing Tools

7.1.6 Color

You can change the color of the line drawn on the image.



To change line colors:

- A. Click **Draw** → **Color**, then you can choose colors from Black, White, Gray, Green, Blue, Yellow, and Red.
- B. Click **User** for the different colors other than the above-mentioned ones. Then the full color palette will appear.



In the color palette, you can click Add to Custom Colors to open up an expanded color window.

Basic colors:				E
Lustom colors:	ŀ	lu <u>e</u> : 160	<u>B</u> ed:	0
		lu <u>e</u> : 160 Sat: 0	<u>R</u> ed: <u>G</u> reen:	

7.1.7 Style

This enables the user to change the types of lines used when drawing on the image using the Drawing Tool (Free Draw, Line, Poly-Line, Rectangle, and Ellipse).

<u>D</u> rav	N	_	
Q	Free Draw		
\mathbf{i}	Line		
\sim	Poly-Line		
	Rectangle		
\bigcirc	Ellipse		
	Color 🔹 🕨		
	Style 🔹 🕨		Dotted
~~	Delete All	—	Thin
			Medium
		-	Bold

If you click $Draw \rightarrow Style$, you can choose Dotted, Thin, Medium, or Bold.

7.1.8 Delete

This is to be used for deleting all drawings on the image using the Drawing Tool (Free Draw, Line, Poly-Line, Rectangle, and Ellipse).

<u>D</u> rat	W
R	Free Draw
\mathbf{i}	Line
\sim	Poly-Line
	Rectangle
\bigcirc	Ellipse
	Color +
	Style 🕨 🕨
¥	Delete All

If you click $Draw \rightarrow Delete AII$, all free draws, lines, poly-lines, rectangle, and ellipse drawn on the image will be deleted. Or, if you right-click the mouse button on the image, a context menu will popup and you can choose Delete Overlay \rightarrow Delete Drawing Overlay to remove the drawings.

Select Zoom In/Out Move	
Draw Distance	_
Delete Overlay 🔸	Delete Selected Overlay
Whitening •	Delete Drawing Overlay
Adjust • Add Implant •	Delete Measured Overlay Delete Implant Overlay Delete Implant Crown Overlay
Magnifier Magnifier LE	Delete All Overlay
Export E-mail	·
Merno Exif Information	
Modality	
Modify Implant	-

7.2 Measuring Tools

These are tools that help measure the length and angles of parts of the patient's image. **Calibration by Model** and **User Calibration** functions are used to correct the measurement results.

			4 Viewer							
<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	Data <u>b</u> ase	<u>D</u> raw	<u>M</u> easure	Im <u>a</u> ge	<u>T</u> ool	<u>I</u> mplant	<u>W</u> indow	<u>H</u> elp

7.2.1 Calibration by Model

Provided herein is an explanation on the method of calibration according to the capturing equipment.



When you click **Measure** → **Calibration by Model**, you can see the list of registered equipment models wherein calibration values for Panoramic / Cephalometric equipments and Intraoral Sensors can be adjusted.

Calibrati	on by Model		×
Panora	ama/Cephalometric —		
List 1	PaX-Primo Pano	 Apply 	
List 2	CT Pano	 Apply 	
List 3	PaX-500 Pano	🖌 🖌 Apply	
List 4	PaX-Duo3D Pano	Y Apply	
List 5	PaX-Reve3D Pano	✓ Apply	
0			
Senso	r		
List 1	AnySensor 1,0	🖌 🖌 Apply	
List 2	AnySensor 1,5	 Apply 	
List 3	EzSensor 1,0	🖌 🖌 Apply	
List 4	EzSensor 1,5	 Apply 	
List 5	EzSensor 2,0	🖌 🖌 Apply	
		Cancel	

The fields from List 1 to 5 of both the **Panoramic / Cephalometric** and **Sensor** equipments list are similar to the bookmark function of Internet Explorer. For example, when you click **Calibration by Model** after registering the **PaX-Primo Pano** in List 1 and the **CT Pano** in List 2, the registered equipments listed in List 1 and 2 are automatically displayed on the **Calibration by Model** window.

The **Calibration by Model** enables automatic input of Calibration values. Thus, if you want to calibrate the image, just click the **Apply** button of the appropriate list.

	Initially, all images are 'non-calibrated images' if no calibration has ever been applied. To perform measurement on the image, the image should first be calibrated. If you try to measure the image that is not calibrated yet, a dialog box requesting calibration will appear, as					
NOTE	Shown below.					

7.2.2 User Calibration

This calibration method enables the user to correct the length by direct input of calibration values manually.

Mea	asure		
-	Distance		
	Continuous Distance		
Yø	Angle		
<u></u>	Calibration by Model		
	User Calibration		
1x	Delete All		

By clicking **Measure** \rightarrow **User Calibration**, a user calibration pop-up window will appear, where the user can directly enter these values.

ser Calibration		E
Width length		
Real length :	5 😂 (mm)
Measured length :	5 🗘 (mm)
Height length Real length :	5	mm)
Measured length :	5 🔷 (mm)
	Apply	Cancel



In order to use User Calibration, the user has to have the actual size of the Phantom and the measured size when the image was acquired by the Phantom.

Image with Ball-Phantom

This is an image that was acquired with a Ball-Phantom in the patient's mouth.



Example of the method to use User Calibration on an image with Ball-Phantom

- A. After acquiring an image using the Ball-Phantom, click Measure → User Calibration from the menu bar at the top of the main screen.
- B. In the User Calibration window, enter the actual size of the Ball-Phantom and click **Apply**. The typical size of Ball-Phantom is 3mm.

Width length		
Real length :	3) (mm)
Measured length :	5) (mm)
Height length		
Real length :	3) (mm)
Measured length :	5) (mm)

C. On the image with the Ball-Phantom, measure the width and height using the **Distance (Refer** to section 7.2.3 Distance) tool.



The measured size of the ball's width is 1.7mm and the height is 1.8mm.

D. Click **Measure** \rightarrow **User Calibration** again. Enter the 1.7 and 1.8 in the measured lengths fields, respectively and then click **Apply**.

User Calibration		X
Width length		
Real length :	3	(mm)
Measured length 3	1.7	(mm)
Height length Real length :	3	(mm)
Measured length :	1.8	(mm)
	Apply	Cancel

E. You can see from the image below that the ball's width in the image has changed from 1.7 to 2.9, and the height from 1.8 to 3.0.





Once image is calibrated, calibration status doesn't be affected by restarting EasyDent. This means recalibration is not required.

7.2.3 Distance

This tool allows you to measure the distance between two points on the image.



You may either click **Measure** \rightarrow **Distance** on the menu bar, or the **MEASURE** icon on the toolbar.

To measure, click the mouse once at the start point and once more at the end point of the distance.



7.2.4 Continuous Distance

This tool allows you to measure the distance between several points, continuously.



A. Click Measure \rightarrow Continuous Distance.

B. Click once the mouse at the start point on the image followed by clicks at many consecutive points and finally, double-click at the end point to acquire the distance.



7.2.5 Angle

This tool allows you to measure an angle between two lines on the image.



$\mathsf{Click}\ \textbf{Measure} \to \textbf{Angle}$

You may measure any angle on any part of the image. Click on three points on the image to create an angle.



7.2.6 Delete All

This tool is used to delete all measurements on the current image that were created using the Measuring Tools (Distance, Continuous Distance, and Angle).

Mea	asure		
100	Distance		
	Continuous Distance		
Pø	Angle		
<u>a</u>	Calibration by Model		
	User Calibration		
*	Delete All		

If you click on **Measure** \rightarrow **Delete All**, all distances and angles added using the measuring tool will be deleted. If you right click on the image, a context menu will appear. From here, you can click on **Delete Overlay** \rightarrow **Delete Measured Overlay**.



7.3 Imaging Tools

These tools allow you to modify images in different ways (invert, film effects, coloring, etc) to analyze image and aid with the patient consultation.

			4 Viewer							
<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	Data <u>b</u> ase	<u>D</u> raw	<u>M</u> easure	Im <u>a</u> ge	<u>T</u> ool	<u>I</u> mplant	<u>W</u> indow	<u>H</u> elp

7.3.1 Invert

By inverting the image, soft tissue such as the blood vessels and nerves that looked dark in the original image will appear in enhanced detail. Invert displays the opposite color of all the original colors of the image.



Click **Image** \rightarrow **Invert** at the menu bar. You can see from the picture below that the image has been inverted.



Original image

Inverted image

7.3.2 Sharpen

The Sharpen function increases the contrast of the pixels to enhance the clarity of the image.

Ima	ge
	Invert
•	Sharpen
))))	Sharpen more
	Median
	Gray Scale
	Coloring
	Film Effect
	Rotation •
	Local Enhancement
€	Zoom In/Out
3	Move
	Property
3	Adjust

Click Image \rightarrow Sharpen. You can see from the image below that it has been sharpened.



Original image

Sharpened image

Sharpen More 7.3.3

This tool simulates running the Sharpen function 2-3 times. If you click the Sharpen more button, you can see that it increases the contrast of pixels and enhances the clarity much more than the Sharpen function.



Click Image --- Sharpen more. You can see that the clarity of the image has been enhanced much more.



After the Sharpen more function applied

7.3.4 Median

This function is used to eliminate the noise in the image. It filters each pixel data in a way that each pixel takes the median of its surrounding pixels. Generally, using the median function will take a median RGB value for each pixel, which smudges the edges of the image.



Click **Image** \rightarrow **Median** and you can see that the image has been changed and smudged, as shown below.



Before applying the median function



After applying the median function

7.3.5 Gray Scale

This shows the degree of brightness in step levels, from white to black.

Ima	ge
	Invert
	Sharpen
	Sharpen more
	Median
	Gray Scale
	Coloring
	Film Effect
	Rotation •
	Local Enhancement 🔸
€	Zoom In/Out
3	Move
	Property
9	Adjust

If you click **Image** \rightarrow **Gray Scale**, you can see that the image will be turned into its Gray Scale, as shown below.





7.3.6 Coloring

This converts the black and white image into a colored one. Red signifies high density and blue signifies low density.

Ima	ge
	Invert
	Sharpen
	Sharpen more
	Median
	Gray Scale
2	Coloring
	Film Effect
	Rotation •
	Local Enhancement 🔸
€	Zoom In/Out
\mathfrak{O}	Move
	Property
9	Adjust

If you click **Image** \rightarrow **Coloring**, you can see that the image changes to color, as shown in the image below.





7.3.7 Film Effect

This modifies the image so that it will have effect of the texture of the developed film.

Ima	ge		
	Invert		
1	Sharpen		
))))	Sharpen more		
	Median		
	Gray Scale		
	Coloring		
	Film Effect		
	Rotation •		
	Local Enhancement 🔸		
€	Zoom In/Out		
3	Move		
	Property		

If you click **Image** \rightarrow **Film Effect**, you can see that the image will be altered into a film effect, as shown below.





7.3.8 Rotation

This enables the user to rotate the image in four different angles.

90 CW

This is for rotating the image 90 degrees, clockwise.



90 CCW

This is for rotating the image 90 degrees, counterclockwise.



Flip Horizontal

This function is for flipping the image horizontally.





Flipped horizontally



Flip Vertical

This function is for flipping the image vertically.





Flipped vertically



Rotation & DB Save

You may rotate the image to edit it. Select the image, and if you click Image \rightarrow Rotation \rightarrow Rotation & DB Save, a rotate window will appear as below.

Ima	ge	_	
	Invert		
1	Sharpen		
	Sharpen more		
	Median		
	Gray Scale		
	Coloring		
	Film Effect		
	Rotation	Ŀ₽_	90 CW
	Local Enhancement	£	90 CCW
÷	Zoom In/Out	÷	Flip Horizontal
<u></u>	Move	1	Flip Vertical
	Property	æ	Rotation & DB Save
9	Adjust		

1. Shows the angle of rotation of the image.



- 2. The same as described above.
- 3. Init: Resets the rotated image to its initial state.

4. **Save to DB**: Saves Rotated image to DB. A warning window pop-up when you try to save a changed image.

Warning!	
	Original file will be changed in case rotated image is saved to DB. Are you sure to change original file? (You can't restore the changed file.)
	Yes No



- 5. **Apply**: Applies the rotated image.
- 6. **Cancel**: Cancels the Edit Image process.

You may click and rotate the axis to rotate the image as many times as you want.



7.3.9 Local Enhancement

This function is used to highlight a specific area of an image and make it easier to view.

Image			
	Invert		
	Sharpen		
))))	Sharpen more		
	Median		
	Gray Scale		
	Coloring		
	Film Effect		
	Rotation •		
	Local Enhancement	256*256	
÷	Zoom In/Out	128*128	
3	Move	64*64	
	Property		
9	Adjust		

A. Click Image \rightarrow Local Enhancement.

- B. Select the part of the image that you wish to enhance. If you click your mouse on that area an enhanced view in a rectangular shape will appear.
- C. Put your pointer on the rectangle and drag it to the area you would like to highlight.



<Example of a 256X256 local enhancement>

7.3.10 Zoom In/Out

This tool allows you to zoom an image in or out.



Click **Image** \rightarrow **Zoom In/Out** at the menu bar or click the **ZOOM** icon on the toolbar and the pointer will turn into $= \mathbb{Q}^{\oplus}$. Dragging the mouse in the left direction will zoom out the image, while dragging it to the right will zoom in the image.



7.3.11 Move

This function allows the user to move the entire image.



Click **Image** \rightarrow **Move** at the menu bar or click the **MOVE** icon on the toolbar, and the pointer on the image will look like this:


7.3.12 Property

With this function, the user can rotate the image and modify the tooth number.

Ima	ge	
	Invert	
₩.	Sharpen	
))))	Sharpen more	
	Median	
	Gray Scale	
Z	Coloring	
	Film Effect	
	Rotation •	
	Local Enhancement 🔸	
€.	Zoom In/Out	
3	Move	
	Property	
9	Adjust	

A. Click Image \rightarrow Property.

55545352 1817161514131 Bite-Wings RM 4847464544434	1 6162636465 211 2122232425262728
B 85 84 83 82 Rotation 90ccw	

B. You can rotate the image by clicking the buttons which located in red bordered box. You also can rotate the image by press and hold down the left mouse button while you drag the pointer up or down.

7.3 Imaging Tools

C. You can change the tooth number by clicking the numbers which in the red border.



Initailize: Resets the rotated image to its initial state.

OK: Saves Rotated image to DB. A warning window pop-up when you try to save a changed image.

Cancel: Cancels the Edit Image process.

Warnin	g!
8	Original file will be changed in case rotated image is saved to DB. Are you sure to change original file? (You can't restore the changed file.)

If you click the Yes button, a window saying that the altered image was saved.



7.3.13 Adjust

Image invert Sharpen) Sharpen more Median Gray Scale Z Coloring III Film Effect Rotation , Local Enhancement ۲ 🔫 Zoom In/Out Move Property BRIGHT CONTRAST Adjust GAMMA

With this function, the user can adjust the brightness, contrast, and gamma values for an image.

A. Click Image \rightarrow Adjust.

B. As shown in the picture below; an Adjust pop-up window appears and you can use the arrow tabs pointing to either sides to change the Brightness, Contrast, and Gamma values on a five-level scale interval.

Adjust	×
Bright :	· ·
Contrast :	>
Gamma :	· ·
Initial	OK Cancel

You can also click the **Bright**, **Contrast**, and **Gamma** icons on the toolbar to adjust the values. Dragging the mouse towards the right side of the image will increase the value, while dragging it to the left will decrease the value.

	1.	Bright: The degree of the brightness. Shows the brightness of
		colors.
	2.	Contrast: The phenomenon where two neighboring colors stand
		out as they are affected by each other. Usually, Contrast
NOTE		increases as the difference in brightness and saturation of a
		color or chroma increases.
	3.	Gamma: The degree of brightness of the monitor.

8 Special Tools

This chapter is about the various special functions within EasyDent, such as Magnifier, Magnifier LE, Slide, Profile, Dual Monitor, Whitening, Snap Shot, and Crop Image.

	-		4 Viewer							
<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	Data <u>b</u> ase	<u>D</u> raw	<u>M</u> easure	Im <u>a</u> ge	<u>T</u> ool	<u>I</u> mplant	<u>W</u> indow	<u>H</u> elp

8.1 Magnifier

This tool is used to magnify a specific area of an image.



Click Tool \rightarrow Magnifier at the menu bar on the main screen. Then the pointer will turn into \checkmark .

Click the mouse on the area that you want to magnify, and that part of the image will be magnified.

If you drag the mouse slowly, you can see that the area surrounding the mouse cursor will be magnified along with the movement of the mouse.



If you click once more after the image is magnified, you can see that the point will be converted back to \bigcirc .

8.2 Magnifier LE

The Magnifier LE (Local Enhancement) is a combination of functions of the Magnifier and the Local Enhancement tools. This function magnifies the specific area and in addition, performs a local enhancement of that area.



Click **Tool** \rightarrow **Magnifier LE** on the menu bar, or click the **MAGNIFIER** icon on the toolbar.

You will see that the mouse pointer will be changed into

If you click on the part that you want to magnify, that part will be magnified, as shown below. If you drag the mouse slowly, you will see that the parts surrounding the mouse cursor magnifies.



If you click once more after the image is magnified, you will see that the point will be converted back to 🔍 .

8.3 Slide

8.3 Slide

This shows the patient's images in the form of a presentation slide.



8.3.1 EasyDent's Image Slide

At the Patient List, choose a patient whose images you want to view. Click **Tool** \rightarrow **Slide** on the menu bar and a Slide Viewer window will appear. You can view all images of the patient on file.



If you want to see the slide of another patient, you can search for that patient through the following steps: Click the **Search** button \rightarrow **Search** dialogue box pops-up \rightarrow Insert the **Chart No.** \rightarrow Click the **Search** button. Click on the patient name with **Chart No.** and press **OK**.

Search	×	Search	X
Chart No :	Search Today	Chart No : 2008	0901_000001 Search Today
Chart No	Patient	Chart No 20080901_000001	Patient Park Eun Kyung
	OK Cancel		OK Cancel

If you click on the image you want to see as a slide, you can see that the color of the image changes, as shown below. Double-click on the image.





As shown in the illustration above, move all the images you want to see in a slide to the **List of selected Image**. By pressing the **Start** button, a window will appear to show the images from the **List of selected Image** in a slide.



Click on the image to see the next slide. When the slides are all viewed, a short message will appear. Press J to exit the slide.

8.3.2 External Image Slide

Click **Tool** \rightarrow **Slide** at the menu bar on the main screen, and the **Slide Viewer** will appear. Click the **Explorer** tab and find the location of the image to be imported.





The method of viewing the slides is the same as in procedure 8.3.1.

8.4 Profile

8.4 Profile

This is a useful tool for measuring the density of teeth before an implant placement.



Click **Tool** \rightarrow **Profile** and the mouse pointer will turn into \mathscr{J} , and a **Profile** pop-up window will appear.

Profile	X
255 -	- 255
100	100
128 -	- 128
0 -	- 0

Select an area where you want to get a density Profile. Click on the initial point, drag it on to the end point of that area you want, and then click again to show the profile window that shows the density of the selected area.



8.5 Dual Monitor

This function becomes available if a dual monitor setup is recognized in the operating system. Dual monitors can be utilized to view the images across two screens.



Click on the following: $Help \rightarrow Configuration \rightarrow Default$. Then, click Use on the Dual Monitor column and you will be able to see the image display on the second monitor.

8.6 Whitening

8.6 Whitening

You can use this function on an image that was taken by an intraoral camera. It can show the results of tooth whitening to the patient beforehand.





8.6.1 Auto Whitening

Click **Tool** \rightarrow **Whitening** \rightarrow **Auto Whitening** at the menu bar to open up a presentation mode that will simulate the whitening process. By clicking on the arrow, you will see the teeth being whitened in up to 3 steps.



8.6.2 Select Area

This tool allows you to choose the area you would like to simulate whitening.

Too		_	
۹,	Magnifier		
۵,	Magnifier LE		
F	Slide		
N	Profile		
풥	Dual Monitor		
	Whitening	剡	Auto Whitening
	SnapShot 🔸		Select Area
	Crop Image	å	Area Whitening
	Layout Editor	2	Brush

- A. Click **Tool** \rightarrow **Whitening** \rightarrow **Select Area**.
- B. Using the Poly-Line tool (Refer to 7.1.3 Poly-Line), choose the area you want to be whitened.



C. If you double-click at the last point, automatic area whitening will be run.

8.6 Whitening

8.6.3 Area Whitening

Using this tool, you can apply whitening to a specific area of your interest.

Too			
۹,	Magnifier		
۵,	Magnifier LE		
F	Slide		
Ny	Profile		
	Dual Monitor		
	Whitening	剡	Auto Whitening
	SnapShot 🔹 🕨		Select Area
	Crop Image	2	Area Whitening
	Layout Editor	2	Brush

A. Click **Tool** \rightarrow **Whitening** \rightarrow **Area Whitening**.



After selecting the area to be whitened using 'Select Area', you may use the 'Area Whitening' function.



B. By clicking the arrow pointing left or right, you can whiten the selected area in 3 steps or levels.

8.6.4 Brush

Using the circle, the user can execute whitening directly.

Too		_	
۹,	Magnifier		
6	Magnifier LE		
F	Slide		
Ny	Profile		
	Dual Monitor		
	Whitening	燙	Auto Whitening
	SnapShot 🔹 🕨		Select Area
	Crop Image	å	Area Whitening
	Layout Editor	2	Brush

A. If you click **Tool** \rightarrow **Whitening** \rightarrow **Brush**, the mouse pointer changes into the shape of a circle.



- B. Radius refers to the size of the circle.
- C. Hardness refers to the strength of Whitening.

8.6 Whitening

D. Once you have adjusted the size of the circle and the strength of the whitening, you can click on the circle and drag it across areas that you want to be whitened.





Please be aware that double-clicking the mouse will bring you back to the main screen.

You can capture an image of the screen of EasyDent in 3 forms: Full Screen, Window, and Area. These snapshots can be pasted (CTRL+V) into programs such as **Paint** or **Photoshop**. If needed, you can edit or save a captured image.



8.7.1 Full Screen

This captures the whole screen of EasyDent.

- A. Click **Tool** \rightarrow **SnapShot** \rightarrow **Full Screen**.
- B. Click on any area of the EasyDent screen.
- C. Open the **Paint** and execute CTRL+V (paste) and you will be able to see that the whole screen of EasyDent has been captured.



8.7.2 Window

This captures a specific area on the EasyDent screen.

Too		
۹,	Magnifier]
6	Magnifier LE	
,	Slide	
Ny	Profile	
	Dual Monitor	
	Whitening •	
	SnapShot 📃 🕨	Full Screen
	Crop Image	Window
	Layout Editor	Area

- A. Click **Tool** \rightarrow **SnapShot** \rightarrow **Window** accordingly, then a target mark ($\textcircled{\textcircled{b}}$) will appear.
- B. If you click and drag the target mark to any window of the EasyDent screen, a red frame image to be captured will be created.
- C. If you release the mouse button at this point, the selected area (window) will be captured and saved to the C:\Easydent4\EdpV4\SnapShot.



The SnapShot folder is automatically created at C:\Easydent4\EdpV4 as you installed the Easydent4 program.





D. Open the **Paint** and execute CTRL+V (paste).



8.7.3 Area

This function enables you to crop and capture the area that you want on EasyDent.

Too		
۹,	Magnifier	
Б,	Magnifier LE	
F	Slide	
N	Profile	
풥	Dual Monitor	
	Whitening •	
	SnapShot 📃 🕨	Full Screen
	Crop Image	Window
	Layout Editor	Area

A. Click Tool → SnapShot → Area, and a cross-shaped intersecting lines will appear, as shown below.



B. Position the center of the cross-shaped line on the area you want, then click and drag it to create a rectangular area for you to capture, then click once more.



C. Open the **Paint** and execute CTRL+V (paste).



8.8 Crop Image

8.8 Crop Image

A Panorama image can be cropped and used as an intraoral sensor image.



- A. Click **Tool** \rightarrow **Crop Image** on the menu bar.
- B. Click once at the position on the image you want, and then drag the pointer to a position where you like to place it, and click. A yellow rectangle will appear with 8 red dots. The size of this rectangle can be adjusted.



8.8 Crop Image

C. If you right-click the mouse inside the yellow rectangle, a context menu asking whether to **Save to DB** or **Delete** will appear.

Save to DB: It allows the selected image to be saved like the image of an intraoral sensor.

Delete: You can delete the selected region.



D. Click Save to DB button, and a Save to DB window will appear.

You need to choose an image type, Panorama, Cephalo, Intraoral Sensor, or Intraoral Camera. For choosing **Intraoral Sensor**, the location of the teeth needs be selected. Press **Save** to finish.

Fave to DB Information Chart No : 20081001_0	00001 Name : E-W(00		X
Count : 1 EA File Name ▶ C:₩EasyDent4₩EdpV4	Resu \\CropTemp\\CropImag		/ 0 Image Type	Total File
▼ Type: Intra-oral Sen:	int sor	Save	>	Cancel
Cophalo Direction Frontal ® Lateral Modality Lat_Flim	- Intra-oral X-Ray & Cam Device Intra-oral Sens 🛩	Hera E D C B 0 18.171615143121 ● C 0 0 0 0 0 0 0 Bite-Wings RM RI 0 0 0 0 0 0 0 0 0 Bite-Vings RM RI 0 0 0 0 0 0 0 0 Bite-Vings 0 RM 0 RI 0	A A B C 1 212223 0 000 0 LI 0 000 1 313233 A A B C	D E 24 25 26 27 28 00000 0 LM 00000 34 35 36 37 38 D E

8.8 Crop Image

After saving the data, click **OK** or **Cancel** to close the **Save to DB** window.

Chart No :						
Count :	1 EA	Resu	lt:	1 /	1	Total
File Name				In	age Type	
✓ C:₩EasyDe	ent4₩EdpV4₩Ci	ropTemp₩CropImag	e.bmp	Int	ra-oral	
			4 X			
Type: 1	Intra-oral Sensor		aved to DB.	: Complete		Cancel
Type : I Cephalo Direction		() si	aved to DB.][Cancel
Type : I Cephalo Direction	Īr		aved to DB.	р с в а) (Cancel
Type : I Cephalo Direction O Frontal	Īr	tra-oral X-Ray & Carr	aved to DB. Save	р с в а) (Cancel
Type : I Cephalo Direction O Frontal Modality	• Lateral	ntra-oral X-Ray & Carr Device	aved to DB. Save Tera E 18 17 16 15: Bite-Wings	D C B A 4131211	A B C 21 22 23	Cancel Ca
Type : I Cephalo Direction O Frontal	Īr	ntra-oral X-Ray & Carr Device	aved to DB. Save Tera E 18 17 16 15: Bite-Wings	р с в а	A B C 21 22 23	Cancel Ca
Type : I Cephalo Direction O Frontal Modality	• Lateral	ntra-oral X-Ray & Carr Device	aved to DB. Save nera E 181716155 Bite-Wings RM	D C B A 4131211 RI	A B C 21 22 23	Cancel Ca

If you click the patient file again on the Patient's List, you can check the saved Crop Image.

EasyDent V4 Viewer								□ X
le Edit View Database Drav	v Measure Image Tool :	Implant Window He	lp					
ATENT SFD UNDOU MAGE	BRGHT CONTREST GAVINA ZOO	NAGNIFER REPORT	DRAUNG MERSURE	NPLANT CRCUN UHITENING SCIE		() ITRUZE		
HIGH SENSOR CAWERA DENTAL (T Patient Explorer		2	5		mi	(A		X
	2012/04/23 PM 02:51:08 20	10/04/26 PM 02:27:17	2006/08/18 PM D	5/27/46 2004/03/20 PM 01:54:	24 2004/03/20 PM 01:54:3	24 2004/03/20 PM	01:18:08 2004/03/20 PM 01:17:22	2004/0
	<			"Click				
	Patient Image View	Layouts Cons	sultation	CIICK				
	Patient List				Image List			
	Patient Name	Chart No.	Gender Ag	je Birthday	Image Type		Captured Date	
Chart No. 20120423 🔺	Tak SooYong	20120423_134745	Male 2	5 1985/11/26	T CT		2012/04/23 PM 02:51:08	
First Name Tak	an a				L CAMERA [12]		2010/04/26 PM 02:27:17	
Last Name SooYong					SENSOR [25]		2006/08/18 PM 05:27:46	
Social ID 1123123**					S SENSOR [15]		2004/03/20 PM 01:54:24	
Age/Gender 26 / Male					S SENSOR [34]		2004/03/20 PM 01:54:24	
Treatment Treatment					P PANORAMA		2004/03/20 PM 01:18:08	
Mobile					P PANORAMA		2004/03/20 PM 01:17:22	
Tel +					PANORAMA		2004/03/20 PM 01:14:26	
					PANORAMA		2004/03/20 PM 01:14:26	
Search(Date)					S SENSOR [11]		2004/01/02 PM 07:42:48	
Total (Images) : 10								
	Today Captured List							
		rt No.		Birthday	Patient Name	Chart No.	Birthday	
	<u></u>							
asyDent V4 running						D-Server Con	nected 📑 F-Server Connected	CE Si

8.9 Layout Editor

This **Layout Editor** provides tools to create user-defined layout. Layout sequence can be designated by the user. Created layout and sequence information can be saved on the database and shared with others.



Click **Tool** \rightarrow **Layout Editor** on the menu bar.



8.9 Layout Editor

1. Layout Templates

This function provides to Add, Copy, Rename, and Delete of the Layout Templates.



Layout Templates Creating Tools

- Add: Creating new templates on the List. You can re-enter the name of newly created template.
- **Copy**: Selected template will be copied and added on the List.
- Rename: Selected template's name will enable to edit.
- Delete: Selected template will be deleted from the List.
- 2. Layout Sequence

This function provides Add, Rename, and Delete of the Layout Sequence.

Layout Sequences
Basic
http://www.com/com/com/com/com/com/com/com/com/com/
hightToLeft
🚹 ZigZag
Add Rename Delete

- **ADD**: Creating new sequence on the List. You can re-enter the name of newly created sequence.
- Rename: Selected sequence name will enable to edit.
- Delete: Selected sequence will be deleted from the List.
- 3. Layout Sequence Setting

If you click the **Start** button on the bottom of the Layout Diagram, sequence will be changed by the clicking Tooth image Box. Click **Stop** button after the changes. If you click the **Modify** button, pre-set sequence will be changed. Also, if you click already designated Tooth image Box of the sequence, it will be deleted and another sequence number will be given.



4. Layout Diagram

Layout Template can be edited with the functions of add, delete, rotate and change image size of the Tooth Image Box.

- Add(H): Landscape Tooth image Box will be added.
- Add(V): Portrait Tooth image Box will be added.
- **90ccw**: Rotating the Tooth image Box as counterclockwise.
- 90cw: Rotating the Tooth image Box as clockwise.

- Size(-): Reducing Tooth image Box.
- **Size(+)**: Enlarging Tooth image Box.
- Edit: Editing name and tooth numbers of the Tooth image Box.
- Delete: Deleting selected Tooth image Box.
- 5. Setting Tooth No.

Double click Tooth Image Box to designate tooth number. Tooth No. will display either FDI Numbering Notation or Universal Numbering Notation by the setting.

Tooth	Tooth
Name URM	Name URM
Tooth No	Tooth No
55 54 53 52 51 61 62 63 64 65	A B C D E F G H I J
18 1716 15 14 13 12 11 21 22 23 24 25 26 27 28	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
RM RI LI LM	RM RI LI LM
48 47 46 45 44 43 42 41 31 32 33 34 35 36 37 38	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
85 84 83 82 81 71 72 73 74 75	
OK Cancel	OK Cancel

* Left: FDI Notation, Right: Universal Notation

8.10 Layout Viewer

A. Layout Viewer

Saved Layout Template can be selected and displayed on the Layout Viewer. Taken images will be displayed on the ToothBox, and if there are several relevant images in one Tooth Box, only representative images will be displayed as a thumbnail image.



B. Select Layout Template

Select and click the Layout Template combo box. Preview, click and display the Layout template.



C. Adding image box

If you drag and drop the thumbnail images on the Tooth image Box of the Layout Viewer, Tooth No. will change and display by the relevant Image Box.



D. Changing representative images

If there are several images exist on the specific tooth number on the ToothBox, most recently taken image will become a representative image. On the thumbnail, the image will be marked as representative image. If you want to change the representative image, select an image you want, mouse right click then select **Set Default Image for Report**. Changed image will display on Tooth Box.



E. Display images by the captured date

On the last drop box, all of the patient's image captured date will be displayed. If you want to display images which captured on specific date, select the date then images will display on the Tooth Box.



F. Print Layout Viewer

If you want to print Layout Viewer, select Layout tab, click File from the menu bar, and select Report(Screen).



8.10 Layout Viewer

8.10.1 Intra-Oral Sensor Shooting

A. Select Shoot Type

If you click the shoot type combo box, shooting method will be displayed. Select and change the method.



- **Single**: Single type is about selecting tooth number and click Capture button to take pictures. After the shooting, the images will be displayed on the Tooth image box.



- **Multiple**: Multiple type is about taking several images on the same location. Shooting type is same as single.
- **Basic**: Basic type is about taking images by the designated sequence from the layout editor. Capture will be terminated after the last sequence shooting is done.

8 Special Tools

8.10 Layout Viewer



- B. Progression UI
 - Waiting



- In Progress



- Optimizing



8.10 Layout Viewer

8.10.2 Intra-Oral Sensor Setting

If you want to select Intra Oral-Sensor, click Menu \rightarrow Help \rightarrow Intra-Oral Sensor Setting.

Help	D	
	About EasyDent Viewer	
R	Configuration	
	Intra-Oral Sensor Setting	Select Device

If you select Intra Oral-Sensor and Image Processing Option, selected Intra Oral-Sensor Setting will apply.

Select Intra-Oral Sensor	Autor and A		23
Intra-Oral Sensor M	odel		
© HDS-150	© HDS-150S	© HDS-100L	
AnySensor 1.0	AnySensor 1.5	O AnySensor 1.0N O AnySensor 1.3	5N
EzSensor 1.0	© EzSensor 1.5	© EzSensor 2.0 © EzSensor Mult	ti
🔘 Hyman	© EzSensor P		
Image Processing Op	otion		
e High Contrast	Middle Contrast	© Normal Image © Low Contrast	
		Ok Cance	I

9 Implant Simulation

This chapter will explain methods of utilizing simulated implants and crowns on acquired images. Before an actual implant placement, the procedure can now be much better planned by first doing an implant or crown simulation.



9.1 Add Implant

To begin the simulation process, the user must first select an implant by searching for a fixture through three submenus (manufacturer, shape and length).



You can either click **Implant** \rightarrow **Add Implant** on the menu bar or click on the **IMPLANT** icon on the toolbar, and the window below will pop-up.



After selecting the proper implant, click the **Insert** button. An implant will be created on top of the image. Place the cursor on the location where you want to place the implant and then **click**.

9.1 Add Implant

9.1.1 Moving an Implant

Click the **SELECT** icon on the toolbar, and then click on the center of the implant. The selected implant will be highlighted with red border. Click and drag it to the desired position.



9.1.2 Rotating an Implant

Using the **SELECT** button on the toolbar, click one of the four corners of the implant and rotate the implant in the desired direction and angle.


9.2 Delete All Implants

This tool allows you to delete all simulated implant overlays on the image.

Implant		
42	😵 Add Implant	
*	Delete All Implant	
8	Add Implant Crown	
\Im	Delete All Implant Crown	

- A. On the menu bar, click **Implant** \rightarrow **Delete All Implant** to delete all Implants on the image.
- B. Or, you can right-click on the image to show the Context menu Window. Then click Delete
 Overlay → Delete Implant Overlay to delete all implants on the image.

Select Zoom In/Out Move	
Draw Distance Delete Overlay	Delete Selected Overlay
Whitening •	Delete Drawing Overlay
Adjust Recently implant Initialize Magnifier Magnifier LE	Delete Measured Overlay Delete Implant Overlay Delete Implant Crown Overlay Delete All Overlay
Export E-mail	
Memo Exif Information	
Modality	
Modify Implant	

9.3 Add Implant Crown

9.3 Add Implant Crown

You can place an implant crown overlay on the implant simulation.

mpl	lant
Ŷ	Add Implant
*	Delete All Implant
6	Add Implant Crown
R	Delete All Implant Crown

- A. Click **Implant** \rightarrow **Add Implant Crown** on the menu bar and a **Crown** pop-up window will appear.
- B. You will notice that when you place the mouse pointer on a tooth, its color changes.



C. When you click the colored/highlighted implant crown, an implant crown will appear on the image.



D. Move the crown and place it on top of the implant overlay.

9.3.1 Moving the Implant Crown

Click the **SELECT** button on the toolbar then click the **Implant Crown**. The selected implant crown will have dotted edges and a **+** indicator in the center.

Place the crown to its appropriate location by clicking and dragging it.



9.3.2 Rotating the Implant Crown

Click the **SELECT** button on the toolbar then click on one of the four corners of the implant crown. The selected implant crown will have dotted edges. Click the corner and rotate the implant corner in the desired direction and angle.



Click



9.3 Add Implant Crown

9.3.3 Adding a Point

This function allows you to change the shape of the crown.



- A. Click the crown on the image.
- B. Right-click the mouse and choose Add point.
- C. Click on the area of the crown where you want to add a point. You will notice that a black square dot is added.



9.3.4 Changing the Crown

The shape of the crown can be changed according to the user's preference. When necessary, you can add a point using Procedure **9.3.3. Adding a point**.

Click a crown on the image; then choose a black square point on the edge of the crown which you can use to change its shape. Click on it then drag to form a shape you want to make.



9.3.5 Changing the Crown Color

The crown color of the implant can be changed according to the user's preference.



- A. Choose a crown within the image.
- B. Click **Color** on the context menu, which pops up after clicking the right mouse button.
- C. Adjust the Red, Green, and Blue color bars individually until the desired color is obtained in the rectangle. When the color is set, press **Ok**.

Color	Color	×
0 255 Red Green Blue Use Gray Scale Ok Cancel	0 255 Red Green Blue Use Gray Scale Ok Cancel	

D. Notice that the color of the crown has been changed from white (initial value) to the color which the user has chosen.





9.4 Delete All Implant Crown

9.4 Delete All Implant Crown

This tool allows you to delete all crown overlays on an image.



- A. Click Implant → Delete All Implant Crown on the menu bar, or right-click on the crown to be deleted and then click Delete to delete the selected crown or click Delete All to delete all crowns.
- B. Or, you may right-click anywhere on the image to have the Context Menu then click **Delete Implant Crown Overlay** to delete the Implant Crown.



10 Window

This chapter explains the method which the user can use to view the windows in a convenient layout.

10.1 Main Screen

This is the basic image display window of EasyDent. On the left is the patient information, on top is the menu bar, beneath is the toolbar in icons and buttons, and on the middle is a display of the patient's teeth.



Click **Window** \rightarrow **Main Screen** on the menu bar or click **WINDOW** icon on the toolbar, to see the Main Screen in default mode. (This display is a default screen set at the start of EasyDent software.)



10.2 Extended Screen

10.2 Extended Screen

This is an extended screen from the Main Screen.

<u>W</u> in	dow	
18	📔 Main Screen	
	Extended Screen	
	Full Screen	
	1 Window	
	2 (2*1) Window	
	2 (1*2) Window	
8	3 Window Type - A	
	3 Window Type - B	
88	4 (2*2) Window	
	6 (3*2) Window	
	6 (2*3) Window	
	9 (3*3) Window	

Click **Window** \rightarrow **Extended Screen** and you will see the window as shown below.





If you double-click on the image shown on the main screen, it will be extended. Conversely, if you double-click the mouse on the extended screen, it will return to the main screen.

10.3 Full Screen

This screen is a maximized mode, only to have one large image.

<u>W</u> in	dow	
旧	Main Screen	
	Extended Screen	
	Full Screen	
	1 Window	
	2 (2*1) Window	
	2 (1*2) Window	
먬	3 Window Type - A	
	3 Window Type - B	
	4 (2*2) Window	
	6 (3*2) Window	
	6 (2*3) Window	
	9 (3*3) Window	WINDOW

Click **Window** \rightarrow **Full Screen** on the menu bar or click the **WINDOW** icon on the toolbar (You may also use the ALT+ENTER), and you will see the window similar to the figure below.



	1.	The full screen can only be entered through the extended screen
		mode. Thus the full screen button will not be active on the main
		screen.
NOTE	2.	If you double-click the mouse on the full screen, it returns to the
		extended screen.

10.4 1 Window

10.4 1 Window

With this window, the user will be able to view only one selected image.

<u>W</u> in	dow	
18	Main Screen	
	Extended Screen	
	Full Screen	
	1 Window	
	2 (2*1) Window	
	2 (1*2) Window	
8	3 Window Type - A	
	3 Window Type - B	
88	4 (2*2) Window	
	6 (3*2) Window	
	6 (2*3) Window	
	9 (3*3) Window	WINDOW

By clicking **Window** \rightarrow **1 Window** on the menu bar or **WINDOW** \rightarrow **1 Window** on the toolbar icons, you will be able to view a selected image.



10.5 2 (2*1) Window

This enables image window to split into two areas, as shown in the following figure.

<u>₩</u> in	dow	
16	Main Screen	
	Extended Screen	
	Full Screen	
	1 Window	
00	2 (2*1) Window	
	2 (1*2) Window	
8	3 Window Type - A	
	3 Window Type - B	
88	4 (2*2) Window	
	6 (3*2) Window	
	6 (2*3) Window	
	9 (3+3) Window	WINDOW

A. Click Window \rightarrow 2 (2*1) Window on the menu bar or WINDOW \rightarrow 2 (2*1) Window on the toolbar icons, then the screen will be split into two parts.



10.5 2 (2*1) Window



B. Click and drag the images of your choice from the Thumbnail to those areas.

- C. Click **Window** \rightarrow **Extended Screen**, or double-click the main screen to extend the screens.
- D. Place your mouse pointer on the border of two image windows, and then a bar with two arrows will appear in the middle. You can adjust the size of the each image window, according to your preference.





The window size adjustment is effective only for the full and extended screens.

10.6 The Other Split Windows

2 (1*2) Window: two split views

The rest of the window arrangements will appear like the images.



3 Window Type – A: three split views





10.6 The Other Split Windows



3 Window Type – B: three split views

4 (2*2) Window: Four split views



6 (3*2) Window: Six split views



6 (2*3) Window: Six split views





10.6 The Other Split Windows



9 (3*3) Window: Nine split views

11 DICOM Print and Report

This chapter describes the DICOM prints and Report incorporated in EasyDent.

EzDICOM Print is the DICOM Print function built in EasyDent that can print Panorama/Cephalo images acquired from the patient through the DICOM Film Printer, which supports an output of 1:1 real-size image or automatic fit-on function.

The **Report** function is summarized in the following table.

	Function	Description
	Ruler Display	Measure the image in millimeter unit
Report	Title Input	Enter the name of the clinic, hospital, or radiology center (RC)
	Comment Input	Enter comments on the Header and the Footer.

11.1 EzDICOM Print

11.1.1 EzDICOM Print's Requirement (about SCP1)

A DICOM Film Printer has to be registered at the EzDICOM Print's local AE Title ('EVPRINT').

For the printing options of DICOM Film Printer, the Magnification Type should be set to NONE and CUBIC.

Be advised to take the following procedures when installing EzDICOM Print.
 The 'DICOM Conformance statement' of the DICOM FILM Printer must be sent to the EasyDent development team. Please make sure with them whether the DICOM FILM Printer can be used with EzDICOM Print.

(**SCP**¹: DICOM Service Class Provider; here, SCP refers to the DICOM Film Printer where the user requests for Film Printers.)

11.1.2 Using EzDICOM Print



- A. Search and select the patient whose image you want to DICOM print.
- B. On the thumbnail, choose the image that you want to DICOM print by clicking and dragging it over to the 'Image View' window.



C. If you click the File \rightarrow DICOM Print, the DICOM Print Mode dialogue box will appear. Choose whether to print the Selected images of patient or All images of patient and then click Print.

DICOM Print Mode
Mode
Selected images of patient
 All images of patient (Camera image and not calibrated images are excluded.)
Print Cancel

When you run the DICOM Print and the image is uncalibrated, the		
calibration dialogue box will appear, as shown below.		
Calibration The mage init calibrated. Please select 1. Calibration by Model 2. User Calibration Carcel For more details, refer to sections 7.2.1 Calibration by Model and 7.2.2 User Calibration.		

D. Once you click **Print**, an **EzDICOM Print** pop-up window will appear, as shown below.



- 1. **Preset**: EzDICOM Print module provides Preset files which can be seen with brief descriptions of its preset panel. Each preset type provides a number of images, margin application, and title indication.
- 2. **Preview Preset List**: You can view the selected images from EasyDent in the Preview Image List. Select a Preset form then drag and drop it to the Main Form. Select the image from the Preview Image List, and then drag and drop the image to the Main Form.
- 3. **Main Form**: show image for actual film printing.
- 4. **DICOM Printers**: User can add, delete, modify, and verify the information about the DICOM Printers.
- 5. **Film Option**: User can set up the film type, direction, and film calibration for each film as defined by the DICOM regulations.
- 6. **Zoom**: User can zoom in and out the image.
- 7. **Etc**: Print, EzDICOM option, About, and Exit functions can be used.

EzDICOM Print Usage Method

A. From the Preset Window, double click the preset form you selected and it will be created on the Main Form Window.

EzDICOM Print					23
Preset	Form			DICOM Pri	nters
Type E - 3					
Image :3 Margin :X Title : O	Dental Clinic Clinic Na	me : Vatech & E-Woo	Patient Name : Tak SY(M) Chart No. : 1 Birthday : 2012/01/01	AETTI	UE Vatech
Type E - 4	-> Double	e click		bbA	
Type F - 1					Edit
Image :3 Margin :X Title : X				Description AE Title Host Addr Port Numb	: Vatech ess : 127.0.0.1
Type F - 2 +				22	
Preview Image List					
				Film Option	
				Size :	8INX 10IN 🔻
				Orientatio	n: PORTRAIT +
				Medium Ty	ype : BLUE FILM 🔻
				Magnificat	ton : NONE 🔹
c20040709_121658_0000.bmp					Film Calibration
p20040426_183816_0000.bmp				Zoom(%)	
					Option
				-	About
	09(h) 35(m) 09(s) - 2012/	17/02			
				PRIN	rr 🚺 Exit

B. Click an image from the Preview Image List, then drag and drop it to the desired location on the Main Form window.



C. To print, select the **Film Option** and the **DICOM Printer** then click the **PRINT** button.



11.1.3 Setting up the DICOM Printer

You can add, delete, and modify the DICOM Printer, as well as verify the information of the chosen DICOM Printer.



1. Registered DICOM Printer List

 Add: Add DICOM Printer. Click the Add button and the Add DICOM Printer window appears. Input the information of the DICOM Printer, which you wish to add, and then click the Add button.

Add DICOM Printer		Y	Add DICOM Printe	r	23
AE Title	Host Address	Port Number	AE Title Vatech	Host Address	Port Number 104
Description			Description Virtual Dicom Print		_
Host Address* : I Port Number* : Po	me of application that DICOM Pr P Address of DICOM Printer art number of DICOM Printer ent DICOM Printer's description (*: Re OK	inter has equired Element) Cancel	Host Address* : Port Number* : P	ame of application that DICOM Printer IP Address of DICOM Printer fort number of DICOM Printer rent DICOM Printer's description (*: Re OK	nter has quired Element) Cancel

Add DICOM Printer

- 3. **Delete**: Delete the DICOM printer
- 4. Edit: You can edit the information of the DICOM printer. Select the DICOM printer you want to edit then click the Edit button. An Add DICOM Printer window will pop up. Modify the DICOM Printer information and click the Edit button.

Edit DICOM Printer	1	23			
AE Title	Host Address	Port Number			
Vatech	127 . 0 . 0 . 1	104			
Description					
Notice					
	ne of application that DICOM Pri	nter has			
	Host Address* : IP Address of DICOM Printer Port Number* : Port number of DICOM Printer				
Description : Curre	ent DICOM Printer's description				
	(*:Re	quired Element)			
	OK	Cancel			

Edit DICOM Printer

5. **Description**: You can verify the AE Title, Host Address, Port Number, and information of the selected DICOM Printer.

11.1.4 Film Options

You can set up the **DICOM Film Size, Film Orientation, Medium type, Magnification,** as well as the **Calibration value** of each film. When you modify the film size and orientation, the changes can be viewed at the main form window.

Film Option		
Size :	8INX10IN	*
Orientation :	PORTRAIT	*
Medium Type :	BLUE FILM	*
Magnification :	NONE	*
Film Calibration		

Size

On Film Option, the film size can be selected according to preference.



Orientation

The film orientation allows you to configure the lay-out of the film print to either Portrait (Vertical), or Landscape (Horizontal). Portraits are usually used for Cephalometric images, while Landscapes for Panorama images.





When you modify the film size and orientation, its changes can be viewed at the main form window.

Medium Type

You can choose the film type to either CLEAR FILM or BLUE FILM.

Medium Type :	BLUE FILM 🛛 🔽
	CLEAR FILM
	BLUE FILM

Magnification

You can choose the magnification option from the four types (NONE, REPLICATE, BILINEAR, or CUBIC), which are available for application on the image data.

Magnification :	NONE 🔽
	NONE
	REPLICATE
	BILINEAR
	CUBIC

Film Calibration

The Film Calibration allows the user to input the **Real Length** and the **Ruler Length** values in order to print in a 1:1 ratio with DICOM Print.

A pop-up window will appear when you click **Film Calibration**.

Calibration		×
Apply Value : 1		
User Calibratoin		_
Real Length :	100 (mm)	
Ruler Length :	100 (mm)	
	Calc	
Apply Option —		
• All Film	O Selected Film	
AIIFIIII		
	Apply Cancel	

- **Apply Value:** Input the Real Length and the Ruler Length, and then click the **Calc** button to get the Apply Value (Apply = Real Length / Ruler Length).
- Real Length: Input the real ruler measurement of the image size.
- **Ruler Length:** Input the size measured by the ruler on the image.

When measuring the ruler value on the image with a real ruler, there can be differences. You need to input the value of the location where the ruler on the image and the real ruler scale are matching. Also, the bigger the calibration scale values, the higher the accuracy.

In the Apply Option part, you need to clarify whether the Calc value will be applied to all films or just the film selected by the user, and then press **Apply**.



The 'All Film' option will do without compensation in the future DICOM prints. However, when the DICOM Print is changed, you need to perform the same compensation process as the above-mentioned one.

Reason for setting the calibration

Since film sizes differ from the DICOM printers and film manufacturing companies, an actual 1:1 real size compensation of each DICOM printer and film size must proceed prior to using the printer.

First, the ratio of the ruler length on the film print and the actual ruler length should be checked.

For example, if the lengths measured using the ruler on the film and an actual ruler are 100mm and 98mm, respectively, and then enter **98** in the Real Length field and **100** in the Ruler Length field. Click the **Calc** button, and then the value **100/98=1.02040**...will appear in the **Apply Value** field.

11.1.5 Zoom



Zooming In/Out operation can be performed in the range of 10% ~300%.

When you drag and drop images initially, the image will display as Fit On Screen mode.

If you click either 1:1 or Fit On Screen button, the image size will change by the selection. Also, selected button will change to darken color.





1:1 Size



Fit On Screen



11.1.6 Other Functions

	Option
	1 About
PRINT	0 Exit

EzDICOM Module Option

Click the Option button, and then the EzDICOM Option will appear.



• General

- A. The Clinic's Name and the Dentist's Name can be changed at the input boxes.
- B. You can set, change, and preview the Drawing of the Logo Image.
- C. Provides six types of Date Display Modes:

Year/Month/Day - Ex) 2009/08/15

Month/Day/Year - Ex) 08/15/2009

Day/Month/Year - Ex) 15/08/2009

Year.Month.Day - Ex) 2009.08.15

Month.Day.Year - Ex) 08.15.2009

Day.Month.Year - Ex) 15.08.2009

11 DICOM Print and Report

11.1 EzDICOM Print

Year-Month-Day - Ex) 2009-08-15

Month-Day-Year - Ex) 08-15-2009

Day-Month-Year - Ex) 15-08-2009

YearY MonthM DayD - Ex) 2009Y 08M 15D

MonthM DayD YearY - Ex) 08M 15D 2009Y

DayD MonthM YearY - Ex) 15D 08M 2009Y

D. Initial date will display by the EasyDent4 configuration settings.

Annotation

- Show Ratio Function

Option to show or hide the **1:1 real size** calibration and **zoom magnification** ratios of the image.

- Show Ruler

Option to show or hide the ruler when the image is viewed in a calibrated 1:1 real size ratio: Option for 1mm or 10mm unit setting

- Show Print Date Option to show or hide the date printed

- Show kVp

Option to show or hide the kVp data of the image

- Show mA

Option to show or hide the mA data of the image

- Show DAP

Option to show or hide the DAP value.

- Show Captured Date

Option to Show or Hide the capturing date of the image.

- kVp, mA, Captured Date Position

Options for selecting one of the four different positions where the information such as kVp, mA, and image capturing date is to be placed on the main form

About



Click the About button if you want to verify the EasyDent DICOM Print version.

Exit

Click Exit to close the EasyDent DICOM Print program

Print

Click **Print** to execute EasyDent DICOM Printing function.

11.1.7 Sample Images of the Preset Forms:

Sample A (Type A-1)



Sample B (Type E-1)



Sample C (Type B-3)



Sample D (Type D-3)



11.2 Report

11.2 Report

Apart from the printing function of EasyDent, the **Report** function allows printing with added ruler display, title, and comment.

11.2.1 Using the Report Function



A. Through the patient search, select the patient whose image you want to create a **Report**.

B. Then, on the Thumbnail, select a patient's image that you want to report and drag it onto the **Image View**.



C. If you want to report various images at once, use the Window Function as shown in the diagram below. Refer to 'Chapter 10 Window' for guidance on how to use the Window Function.



11.2 Report

D. When you click **File** \rightarrow **Report** on the menu bar or click the **Report** button on the tool bar, a **Report** viewer will appear.



- 1. Thumbnail: Displays the patient's images that you want to print on thumbnail.
- 2. Preview: Provides a preview of the images and contents that you want to print.
- 3. **Print Setup**: Allows the selection and configuration of the printer.
- 4. **Image Scale**: The user can adjust the image scale to either 1:1 or fit on screen.
- 5. Comment: The user can enter comments on the Title, Header, and Footer.
- 6. **Date Type**: The user can change the date format for printing.
- 7. **Print**: Executes the print function according to the user's settings.
- 8. Cancel: The user can cancel the printing process.
The selected patient's image in EasyDent can be previewed at the preview area of the window, as shown above.

If you have reported various images, they appear in the thumbnail area. If the user wants to change the image to be reported, simply select the preferred image on the Thumbnail and drag it onto the preview area to display the image.





If you want to print the image, click **Print**; if not, click **Cancel**.

11.2 Report

11.2.2 Print Setup of the Report

Configure the Printer, Paper size, Orientation, and Copies at the Printer Setup.

Printer

The basic printer of EasyDent is identical to the basic printer configured for Windows (O/S). The user can select his preferred printer.



Paper size

The user can select the size of the sheet. It shows a list of sheet sizes for the printer the user has selected. The paper size currently in the printer is set as the initial sheet size. The configured sheet size will be auto-selected the next time the user wants to print.



EasyDent User Manual

Orientation

You can adjust the print Orientation layout to either Portrait or Landscape. The layout orientation which had been set will be auto-selected the next time you print.



Copies

You may set the number of copies you want to print. Initial setting is 1 copy. You can increase or decrease the number of copies using the up / down arrow. (Minimum: 1, Maximum: 100 copies)



11.2 Report

11.2.3 Image Scales of the Report

You can adjust the size of the image you wish to print. You can either choose 1:1 or fit on screen.



1:1 Mode



Fit On Screen



11.2.4 Comments on the Report

Title

As the user, you can type the title you want and you can choose whether to print a title or not. The input title will be applied directly to the preview on your screen.



Header

You can choose whether you want to print the Header or not. You can also input the contents of the Header. Custom headers will be applied directly to the preview on the screen.



11.2 Report

 MINUME
 Protocol

 POSSION
 Protocol

 Post
 Protocol

As shown below, the header can be input in multiple lines.



Also, the Header can be configured in order to be placed on the Left, Center, or Right of the preview window by the user.



Footer

You may choose whether to print the Footer, and can also input the contents. Custom footers will be applied directly to the preview on your screen.



The Footer, like the Header, can be input in multiple lines.



When inputting multi lines, the letters may overlap the image.

Also, the Footer can be configured in order to be placed on the Left, Center, or Right of the preview window by the user.



11.2 Report

11.2.5 Date Type of the Report

You may select the type (format) of the date to be printed.



11.3 Printer Outcome

11.3 Printer Outcome

< Outcome 1 >

Paper Size: A4

Orientation: Landscape

Image Scale: Fit On Screen

Title: Title Test

Header

Text: Header Test Dr. E-Woo Order: Center

Footer

Text: Footer Test Value Added Technology Order: Right

Date Type: YYYY/MM/DD



11.3 Printer Outcome

< Outcome 2 >

Paper Size: A4

Orientation: Landscape

Image Scale: 1:1

Title: Dental Clinic

Header

Text: NONE

Footer

Text: Footer Test Order: LEFT

Date Type: YYYY/MM/DD



12 CD Publishing

This chapter deals with the burning of CDs for storage of patients' data.

12.1 Saving Data to the CD/DVD Media

- A. Search and select the patient whose data you want to store in the CD/DVD.
- B. Place the image on the Image View window by dragging and dropping it.
- C. Click the **TSFD** button on the toolbar, and then click **CD/DVD Burn** on its sub-menu.

	5	Analysis
-	8	EzChart
Т		EzCodi
TSFD		CD/DVD Burn

D. A Select Burn Mode window will appear, from which you can choose the mode.

Select Burn Mode	×
 Mode ○ All Images of Patient ⊙ Selected Images of Patient 	
OK Cancel	

All Images of Patient: You may burn all images of the patient (excluding CT, TOMO) on the CD/DVD.

Selected Images of Patient: Currently, you may burn the selected images from the Image Viewer window on the CD/DVD. (All images that are included in the Multi-View Window can be stored in the CD/DVD.)

12.1 Saving Data to the CD/DVD Media

E. Insert a blank CD into the drive.

Then the CD Burner window will appear, as shown below. Click the Burn button.

and the	images Descripti				General	17		
No.	Name			Size	Device	E:₩DVDRA	M GSA-T10N	•
1 2	p20061109_1 p20061109_1			4249 KB 11 KB	Label	2008-10-13		
					Supprote	ed Media Type	*700MB CD Media	
					Close	Media		
					Eject	Disc after bur	aing	
					Contraction of the second	Media Status		
					Media :		Eje	ect
Total I	mage Count :	2 EA	Total Size :	4261 KB	Is Blank	?:Yes	Refi	resh
otal Siz	e							
0								700 M
8339								
ime		Progress					10	
Estimat	ted Time	_						Burn
	00:00							burn
	eft							
Time L								Quit

- 1. **Image List**: shows the list of images you selected.
- CD/DVD device information: shows the device information of the CD/DVD-ROM that is installed on the current system.
- 3. **Current Media Status**: shows the current device status of whether a CD/DVD media is present in the CD/DVD-ROM and whether it is available for Burning.

Media (CD/DVD) Eject or Refresh: You can check whether a CD/DVD media is present in the CD/DVD-ROM.

- 4. File Size: shows the size of the file that you can store within the CD/DVD-ROM media.
- 5. **Progress Information**: displays the burning progress.
- CD Burn: CD/DVD Burning Start button. (This will be available when a CD/DVD media is present.)
- 7. **Quit**: Exit CD Burner.

The burning progress will be displayed, as shown below.

ource 1	images Descripti	on			General		
No.	Name			Size	Device	E: # DVDRAM	M GSA-TION
1 2		123548_0000.b 123548_0000t.		4249 KB 11 KB	Label	2008-10-13	
					Supprote	ed Media Type	*700MB CD Media
					Close	Media Disc after burr	
						Media Status	ing
					Media :	CD-R	Eject
Total Ir	mage Count :	2 EA	Total Size :	4261 KB	Is Blank	?:Yes	Refresh
otal Siz 0	ted Time	Progress		Prog	ess		700 M
sumat	0:49						Cance
	eft			Buffer:	100%		Ouit

	mages Descript			General		
No.	Name		E: W DVDRAM GS	A-TION		
1 2		123548_0000.bmp 123548_0000t.bmp	2008-10-13			
				ed Media Type	DOMB CD Media	
				Close	Media	
				💽 Ejec	t Disc after burning	
				Current	Media Status	
					CD-R	Eject
otal Siz 0	mage Count :	Would you please hole	he write. Please wa d on and It will take	ait a few secc	inds	700 ME

me	ted Time	Progress	Finalizing t	he write		
Ectimat	00:00					Cancel
Estimat	Buffer Emr			Empty		
	eft	Time Left Buffer Emp				

F. Once the CD/DVD burning is completed, Click **OK**.

	Images Description		General		
No.	Name	Size	Device E:#	DVDRAM GSA	-TION 🗸
1 2	p20061109_123548_0000.bmp p20061109_123548_0000t.bmp	4249 KB 11 KB	Label 200	8-10-13	
	C	D/DVD Burning	Supproted Media	after burning	DMB CD Media 🛛 🗸
otal II tal Siz	mage Count : 2 EA Total 5	Burning Complete	ed! lia : CD lank? : Yes		Eject Refresh 700 ME
ne	ted Time				Cancel

12.1 Saving Data to the CD/DVD Media

G. Exit the CD Burner by clicking Quit.



12.2 Viewing CD Publication without EasyDent

In general, to view and manage the published data on the CD/DVD requires EasyDent program. But only to view them do without EastDent. In this case, the viewer called the **EasyDent simple viewer** plays the role for EasyDent. This is a simplified version of EasyDentV4's full package.

To install it for the first time:

A. Insert the Published CD/DVD into the drive. And then AutoRun will install the CD Viewer and click **Yes**.

🔤 E:WLauncher.exe	- 🗆 X
	-
Install CD Viewer	
CDViewer program was not inistalled, Do you want to install CDViewer?	
<u>Yes</u> <u>N</u> o	
	-

B. Click Next.



12.2 Viewing CD Publication without EasyDent

C. Select **Complete** and click **Next**. And then showing the progress, installation is complete.



After the completion of the installation, execute the **Launcher.exe** of the CD. You will only be required to execute **Launcher.exe** on the initial run and will not have to do so a second time.



The *EasyDent simple viewer* is a simplified version of the EasyDent which can view and manage the patient data, only to have the viewing capability.

13 Configuration of the Parameters

This chapter explains on how to configure the environmental parameters of the Network, Overlay, Image Processing, and Default values for the proper use of EasyDent.

13.1 Network

This configures the parameters such as the DB and File Server IP Addresses, and Network Connection Time associated with the network connection.



A. Click **Help** \rightarrow **Configuration** on the menu bar, a pop-up window will appear, as shown below.

ſ	Configuration
	Network Overlay Image Processing Default Program
	Please set IP address and network connection time to access to DB Server and File Server each.
	DB Server IP Address
1 -	O Localhost: 127.0.0.1
	Remote Host :
	Database Instance Name :
2 –	File Server IP Address
~	Localhost:
	Remote Host:
3 —	Network Connection Time
5	Connection Time (ms) : 10000 🚁 Response Time(ms) : 10000 😭
	Apply Cancel

- B. Select the **Network** tab.
 - 1. **DB Server IP Address**: Configure the DB Server's IP Address. It consists of Local Host and Remote Host.

13.1 Network

- 2. **File Server IP Address**: Configure the File Server's IP Address. It consists of Local Host and Remote Host.
- 3. **Network Connection Time**: the *Connection Time* is the time that the server waits in order to connect; while the *Response Time* is the time taken for the reception of data after the connection to the server is accomplished. The initial value for each time is optimized, so we recommend keeping the initial value, unless otherwise specified.

You can re-set the Connection Time and the Response Time according to your preference.



IP Address must be set, based on the instruction given in the 'Installation Manual'. Network Connection Time must be set at exactly the same time for the computers sharing the network.

13.1.1 The DB and the File Servers installed on the separate computers

Assuming that the DB Server computer and the File Server computer have the following IP addresses, the Network should be configured, as follows:.

DB Server Computer IP: 192.168.1.100 File Server Computer IP: 192.168.1.150



In this circumstance the two computers must be connected through a network.

A. Click on to the **Remote Host** section of the DB Server IP Address. After that, input the IP Address of the DB Server computer.

Please set IP address and network connection time to access to DB Server nd File Server PAdress © Localhost : @ Remote Host : # Remote Host : File Server IP Address @ Localhost :	Md File Server each, DB Server IP Address • Localhost : • Remote Host : • Network: Connection Time	letwork Overlay Image Processing De	efault Pro	gra	m				
Cocalhost:	Cocalhost: Bernote Host: I32 , 168 , 1 , 100 Outpose Instance Ivarine : File Server IP Address Benote Host: I27 , 0 , 0 , 1 @ Remote Host: Network: Connection Time	Please set IP address and network conne and File Server each,	ection time	e to	acc	ess	to ()B	Server
		DB Server IP Address							
Catabase instance Name : Catabase instance Name : File Server IP Address Localhost : Demote Host : Network: Connection Time	Control (Connection Time	C Localhost :							
File Server IP Address	File Server IP Address	e Remote Host :	192		168		1		100
Localhost: 127 . 0 . 0 . 1 Bemote Host: Network: Connection Time	Localhost: 127 . 0 . 0 . 1 Bernote Host: Network: Connection Time	Database Instance Name :							
Remote Host :	Countrols : Remote Host : Network: Connection Time	File Server IP Address							
Network Connection Time	Network Connection Time	@ Localhost :	127		0		0		1
		Remote Host :							
	Connection Time (ms): 10000 💮 Response Time(ms): 10000								
			Respons	el	îme(ms):[100	00 🗄
			Respons	e T	îme(ms)):[100	00 🔄
			Respons	e T	îme(ms,):[100	00 🕒

13.1 Network

B. Click on to the **Remote Host** section of the File Server IP Address. After that, input the IP Address of the File Server computer.

Attwork: Connection Time Conne	Please set IP address and network connection time to access to DB Server and File Server ach, BB Server IP Address © Remote Host : File Server IP Address © Localhost : © Localhost : © Localhost : 127 0 0 0 . 1 127 0 0 0 . 1 0 . 1 127 0 0 0 . 1 0 . 1 0 . 1 127 0 0 0 0 . 1 0 . 1 0 . 1 127 0 0 0 0 . 1 0 . 1 0 . 1 0 . 1 127 0 0 0 0 . 1 0	Please set IP address and network connection time to access to DB Server and File Server IP Address	figuratio	_						_					
Mark File Server 1P Address	Mark File Server P Address	Mark File Server P Address	etwork	Overlay	Image Pr	ocessing	Default	Pro	gra	m					
Localhost:	Localhost:	Localhost:	Please and File	set IP add Server ei	ress and i ich,	network co	onnection	i time	e to	acc	ess	to I	DB	Serw	er
Connoct -	Connoction Time	Connoct: Connoct:	DB Se	erver IP Ad	dress										
Database Instance Name : File Server IP Address In conditional :	Database Instance Name : File Server IP Address In conditionst :	Database Instance Name : File Server IP Address In contained : In contained : </td <td>۰</td> <td>Localhos</td> <td>:</td> <td></td> <td></td> <td>127</td> <td></td> <td>0</td> <td></td> <td>0</td> <td></td> <td>1</td> <td></td>	۰	Localhos	:			127		0		0		1	
File Server IP Address	File Server IP Address	File Server IP Address	0	Remote H	ost :										
Localhost : Remote Host : 132 , 168 , 1 , 150	Constitution Connection Time	Conalhost:		Database	Instance	Name :									
Remote Host : 192 . 168 . 1 . 150 Network Connection Time	Remote Host : 192 , 168 , 1 , 150 Network Connection Time	Remote Host : 192 , 188 , 1 , 150 Network Connection Time	File S	erver IP Ar	Idress										
Network Connection Time	Network Connection Time	Network Connection Time	0	Localhos									÷		1
	* * Linear MM	Loone MM	9	Remote h	ost :			192	•	168		1		150]
			Netwo	ork Conner	tion Time		E Resp								•
			Netwo	ork Conner	tion Time		Res								•

C. The Network configuration should be set up, as shown below.

Configuration	×
Network Overlay Image Processing Defaul	t Program
Please set IP address and network connection and File Server each.	on time to access to DB Server
-DB Server IP Address	
💿 Localhost :	and the second second
Remote Host :	192 , 168 , 1 , 100
Database Instance Name :	
File Server IP Address	
💿 Localhost :	
Remote Host :	192 , 168 , 1 , 150
Network Connection Time	
Connection Time (ms) : 10000 🚔 Rea	sponse Time(ms) : 10000 🚔
	Apply Cancel

13.1 Network

13.1.2 The DB Server and the File Server installed on the same computer

Assuming that the DB Server and File Server are installed on the same computer which has the following IP address, the Network should be configured as follows.

DB and File Server Computer IP address: 192.168.0.126

- A. Click on to the **Remote Host** field of the DB Server IP Address.
- B. Enter the above-mentioned IP address.
- C. Click the Remote Host field of the File Server Address and enter the same address.

Configuration	×
Network Overlay Image Processing Defau	lt Program
Please set IP address and network connection and File Server each,	on time to access to DB Server
DB Server IP Address	
💿 Localhost :	1
Remote Host :	192 , 168 , 0 , 126
Database Instance Name :	
File Server IP Address	
C Localhost :	
Remote Host :	192 , 168 , 0 , 126
Network Connection Time	
Connection Time (ms) : 10000 🚔 Re	sponse Time(ms) : 10000 🚖
	Apply Cancel



13.2 Overlay

You can configure the initial values of the style and color of the lines which are to be used for Drawing, Measuring, and Implants.

If you click **Help** \rightarrow **Configuration** on the menu bar, a configuration screen will pop-up. Select the Overlay tab.

ĺ	Configuration	1
	Network Overlay Image Processing Default Program	
1 —	Drawing	
	Style : - Medium - Color :	
	Measure	
2 —	Style : - Medium - Color :	
	Font Size : 24 💮 Font Color :	
	Implant	
3 —	Color : Color :	- 4
	Apply Cancel	

- Drawing: configure the style of the line (Dotted, Thin, Medium, and Bold) and its color in the Drawing Tools. You can also change it at Color and Style explained in Chapter 7. Image Processing.
- Measure: select the style (Dotted, Thin, Medium, and Bold) and color of the line to be used in the 'Measuring Tools'. Also, the font size, which has a default of 12 and can either be inputted directly by the user or can be configured by using the scroll on the right to choose any number between 5~100; and the font color can be configured.
- 3. **Implant**: configures the color of the Implant.
- 4. **Crown**: configures the color of the Crown.

13.3 Image Processing

13.3 Image Processing

You can configure the basic functions used for Image Processing.

It is a function which is to be used for applying the current settings of the effects (Bright, Contrast, and Gamma) to similar types of images. Also, four options such as Coloring, Film Effect, Invert, and Grayscale can be applied separately.

A configuration pop-up screen will appear when you click $Help \rightarrow Configuration$ on the menu bar.

1 —	Not use	Image Proce - (Bright/Contra		rogram		
1 —	Not use	- (Bright/Contra	st/Gamma)			
	🔘 Apply cu	irrent setting				
	- Another Image	Processing				
2 —	 Not use 	Coloring	Film effect) Invert	🖱 Gray Scale	
				Apply	Cancel	

Select the Image Processing tab.

- 1. **Image Setting (Bright/Contrast/Gamma)**: saves the current Bright, Contrast and Gamma levels. The default setting is **Not in Use**.
- 2. Another Image Processing: sets the current Coloring, Film Effect, Invert and Gray Scale image process. The default setting is Not in Use.



You need to restart EasyDent after setting these parameters.

13.4 Default

You may configure the values of the Chart No., Dual Monitor, Language, and Magnifiers. A pop-up window will appear if you click **Help** \rightarrow **Configuration** on the menu bar. Select the **Default** tab.

ſ	Configuration	
	Network Overlay Image Processing Default Program	
1 -	Setting Chart No, Insert the "0" character automatically © Use	- 2
	Not use O Use length of Chart No : 8 O Use O Not Use	- 11
	Language	-
3 –	English Size(Pixel) : 128x128	- 5
	Linkage, xml - Birthday Ratio(%) : x 2,0	
4 –	Auto Color(RGB) : None	
6 —	Scale of preview window (Sensor) Ratio on screen (Sensor)	-7
Ŭ	Size : 480 × 480 👻 (Pixel) Ratio : 100% 👻	'
	Start mode Start Chart No Start Name Start Extension	- 8
	Login Option	
	Use login Not use login	- 9
	Date & Time	
	Date type : VYYY/MM/DD Time type : AM(PM) HH:MM:S	- 10
	EX.)	
12 —	🛶 🗹 Use Thumbnail Wheel Event	
	Apply Cancel	

- 1. Setting Chart No.: click Use to set the length of the chart number.
- 2. Dual Monitor: configure whether you want to use dual monitors.
- 3. Language: select the language that you want to use.
- Linkage.xml-Birthday: Interfacing the patient's information with a third-party program through Linkage.xml, you can print out the patient's image, according to your preferred format of the patient's date of birth.
 - Auto: The date format used in Windows OS system is automatically recognized.
 - mm/dd/yyyy: mm/dd/yyyy date form.
 - dd/mm/yyyy: dd/mm/yyyy date form.

Ex) If you input the patient's October 4, 1972 birthday as <04/10/1972> and the other program uses the dd/mm/yyyy date format, the EasyDent program will recognize the format that you have selected.

13.4 Default

5. Magnifier:

- Size (Pixel): You can choose a pixel size among 64x64, 92x92, 128x128, 192x192, and 256x256.

- Ratio (%): You can choose the ratio among x1.5, x2.0, x2.5, and x3.0.

- Color (RGB): You may choose a color for the boundary when magnifying an image. (None, Black, Red, Green, Blue)

- Scale of preview window (Sensor): This function is for the selection of screen resolution for the Preview Window of Intraoral sensor images from 340x340, 480x480 and 640x640.
- Ratio on screen (Sensor): This function is for the configuration of the Intraoral Sensor's proportion to the screen. The ratio of the sensor on the screen can be configured at 100%, 85%, 70%, or 50%.
- 8. **Start Mode**: This allows the user to decide whether to allow the virtual keyboard to appear automatically when searching for a patient in EasyDent using the Start Chart No., Start Name, or Start Extension.
- 9. Login Option: Shows options to configure whether the user should 'Use Login', 'Not Use Login', or 'Auto Login' when executing EasyDent.

- Use login: Set 'Use login' if you want the Login window to appear each time you run EasyDent.
- Not use login (Default Setting): Set 'Not use login' if you don't want the login window to appear each time when you run EasyDent. This is the default setting upon installation of EasyDent.

- **Auto login**: To set **Auto login**, register and save a User ID and Password in the auto login input boxes and these data will be saved in PC. Once you re-execute the EasyDent program, it will automatically log in to the set user account only.

10. **Date & Time**: The Date &Time display format (display mode) on EasyDent can be set according to the user's preference among the random formats selection in the Configuration window.

	Туре	Example
	YYYY/MM/DD	2010/01/31
	MM/DD/YYYY	01/31/2010
	DD/MM/YYYY	31/01/2010
	YYYY.MM.DD	2010.01.31
	MM.DD.YYYY	01.31.2010
Dianlay Format	DD.MM.YYYY	31.01.2010
Display Format	YYYY-MM-DD	2010-01-31
	MM-DD-YYYY	01-31-2010
	DD-MM-YYYY	31-01-2010
	yyyyY mmM ddD	2010Y 01M 31D
	mmM ddD yyyyY	01M 31D 2010Y
	ddD mmM yyyyY	31D 01M 2010Y

Date Display Mode (Ex: January 31, 2010)

Time Display Mode (Ex: AM 08:30:50)

	Туре	Example
	AM(PM) HH:MM:SS	AM 08:30:50
Display Format	AM(PM) HH:MM	AM 08:30
Display Format	HH:MM:SS AM(PM)	08:30:50 AM
	HH:MM AM(PM)	08:30 AM

13.4 Default

Once you set the Date & Time display mode through **Configuration** \rightarrow **Default** \rightarrow **Date & Time**, all Date & Time displays on the EasyDent screen will reflect the same format as set.

Date and Time Display Mode (Ex: MM/DD/YYYY and AM (PM) HH:MM:SS format)

• Patient List -> Birthday

atient Image V Patient List	ew Periapio		ultation N	Mounts	
Patient Name	Chart No,	Gen	Age	Birthday	1
Vatech E-WOO	1	Male	29	10/31/1980	

● Image List → Date Captured

Image List	
Image Type	Captured Date
🕐 PANORAMA	01/28/2010 AM 11:28:40

● Patient → Search(Date)



• Database \rightarrow Patient Management \rightarrow Patient Information

atient Information	320×240
Chart No, 1	
atient Name ; Vatech E-WOO	
Social ID :	
Gender : Male	
Age : 29	Pictu
Birthday: 10/31/1980	
Address1 :	
Address2 :	
E-mail : @	
Tel :	
Mobile :	

13.4 Default



Image Annotation Information – Patient's birthday, date captured

- 11. **Number Keypad option**: This allows the user to use either number keypad or virtual keyboard to search Chart No..
 - Use: Number Keypad
 - **Not use**: Virtual Keyboard)
- 12. **Use Thumbnail Wheel Event**: This function is for configuration of the changeover the previous or next images with mouse wheel on the **Image View** tab.



Restart EasyDent in order to apply the new configurations.

13.5 Program

13.5 Program

Here, you can configure the equipment that is used for capturing the image, as well as the location of the 3D analysis software such as **Ez3D2009**.

If you click $Help \rightarrow Configuration$, a Configuration window will appear. Select the **Program** tab.

	Configuration	IJ
	Network Overlay Image Processing Default Program	
1 -	Select capture mode for Dental CT	
'	Mode : Implagraphy 👻	
_	Select capture mode for panorama	
2 -	Mode1 : v Mode2 : v	_
	Path :	
_	Dental formula	
3 -	F,D.I, numbering system 👻	
	Software for Analysis	
	EzCeph OrthoVision	- 4
	The path of the TOMO Viewer	- 5
	The path of the CT Viewer C:\#Ez3D2009\#Ez3D2009,exe	- 6
		– (
7 -	Enable CR Scanner (Optional)	
'	Link to Sensor Capture Button	
	Apply Cancel	

 Select capture mode for Dental CT: This is used to configure the capture mode for Dental CT equipment such as: Implagraphy, DCT, VCT, EPX-Impla, ECT-12, ECT, Picasso-Trio, Picasso-Pro, Picasso-Master, Picasso-Duo, Master3DS, PaxReve3D, PaxDuo3D, PaXZenith3D, PaxFlex3D, PaxFlex3D UHD, 3theOrtho or NCSW.

The imaging software for PaX-Duo3D and PaX-Zenith3D are linked to DBSave Mode. * **DBSave Mode**: A mode where you directly store the image and image data from the imaging software to EasyDent.

- Select capture mode for panorama: This is used to configure the capture mode for panoramic equipment such as: EzPax, PaX-400(Series), Neo-Top, PaX-PNP, PaX-500, PaX-500 Versa, PaX-500 Versa (C2), PaX-500 OS, PaX-500 OS PRO, PaX-500 ECT, PAX-Uni3D, PaxPrimo, PaXPrimo UHD, PaXPrimo NL, AI Pan and NCSW which captures panoramic images.
- 3. **Dental formula:** You can choose a Dental formula of either the F.D.I. numbering system or the Universal numbering system (USA).

- 4. **Software for Analysis:** You can choose either EzCeph or OrthoVision, both of which are programs for analyzing CEPH images.
- 5. **Path for the TOMO Viewer (EasyDent V4.1.2.6.0104):** You can designate and configure the location of the Ez3D Viewer's execution file.
- 6. **Path for the CT Viewer (EasyDent V4.1.2.6.0104):** You can designate and configure the location of the Ez3D2009 Viewer's execution file.
- 7. Enable CR Scanner (EasyDent 4.1.3.0): Check on the box if you are using CR Scanner.
 * Registration window will pop-up when you check on the box initially.

* After you enter the license information of the CR Scanner, CR Canner menu will enable.



* If you check on the **Link to Sensor Capture** Button, **CR Scanner** will run when you click **SENSOR** button at the toolbar.

14.1 Running EasyDent V4 from EzBridge

14 Interfacing with EzBridge

This chapter explains on how to interface between EasyDent V4(Oversea) and EzBridge. EzBridge helps to share patient information and images between 3rd Party Application and EasyDent V4. It works without setting on EasyDent V4.

14.1 Running EasyDent V4 from EzBridge

EasyDent V4 will run at any other 3rd party application without special set up.

ENT TSFD WINDOW IMAGE	BRIGHT CONTRAST GRMMA	ZOOM MAGNIFIER	REPORT DRAWING	MEASURE IMPLA	NT CROWN	UHITENING SCREENSHOT	MOVE SELEC
OVCEPH SENSOR CHIEFRA DENTAL CT	EasyDent	EasyDent	в	syDent	Es	syDent	HasyDent
				11			
TSFD TOTAL SOLUTION FOR DENTAL	Patient Image V	iew Layouts	Consultation				
TOTAL SOLUTION TON DENINE	Patient List			Imag	ge List		
	Patient Name	Cha	rt No. Gende	, Imag	е Туре	C	Captured Date
Chart No.							
First Name Last Name							
Gocial ID							
kge/Gender							
Freatment							
lobile							
rel +							
Search(Date)							
Jearch(Date)	•	III		+			
	Today Captured List		2000		1920 III	100 1100	2000
	Patient Name	Chart No.	Birthday	Patie	nt Name	Chart No.	Birthday

14.2 Calling Patient Information

When you enter patient's **Chart No.**, on the EzBridge, EasyDent V4 will call patient information. If EasyDent V4 is not currently running, the EasyDent V4 will automatically run and display patient information.

14.3 Calling Images of the Patient

Edit View Database Draw	Measure Image Tool Im	plant Window I	Help	A 0.	RW	
ENT TSFD WINDOW IMAGE	BRIGHT CONTRAST GAMMA ZOOM	MAGNIFIER REPORT	DRAUING MEASU		UHITENING SCREENSH	OT MOVE SELECT
CAMERA DENTAL CT	16	ins	1	E		
atient Explorer	11 🛋	60	Citra I			
		/04/02 PM 07:20:28	2012/04/02 PM	07:20:23		
			m			
	Patient Image View	Layouts Co	nsultation			
	Patient List			Image List		
	Patient Name	Chart No.	Gender	Image Type		Captured Date
hart No. 2	Vatech Networks	2	Male	S SENSOR [16]		2012/04/02 PM
ast Name Networks				S SENSOR [16]		2012/04/02 PM 2012/04/02 PM
ocial ID				a sensor [10]		2012/04/02 PWI
ge/Gender 0 / Male						
reatment Treatment						
obile						
el 🔫						
Search(Date)						
	•	2	•			
tal (Images) : 3	Today Captured List Patient Name Chart	No B	irthdav	Patient Name	Chart No.	Birthday
	Patient Ivanie Chart	110.	indiday	Patient Marrie	Chart No.	Undruday

14.3 Calling Images of the Patient

When you enter patient's Chart No. on EzBridge, EasyDent V4 will call required patient's image and display the image on the screen. If EasyDent V4 is not currently running, the EasyDent V4 will automatically run and call patient's image.



APPENDIX 1 Installing EasyDent V4

1

APPENDIX

Installing EasyDent V4

- A. Insert the CD/DVD with EasyDent into the drive.
- B. Select the language.
 - EasyDent V4 InstallShield Wizard

 Choose Setup Language

 Select the language for the installation from the choices below.

 Chinese (Simplified)

 Chinese (Simplified)

 Chinese (Simplified)

 Chinese (Simplified)

 Cancel

 Physical Science

 Physical Science

 Physical Science

 InstallShield
- C. Preparation for the installation now is in progress.

EasyDent V4 - InstallShield Wizard
Preparing Setup Please wait while the InstallShield Wizard prepares the setup.
EasyDent V4 Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.
InstallShieldCancel

D. Click **Next** to continue.

EasyDent V4 - InstallShield Wizard		×		
	Welcome to the InstallShield Wizard for EasyDent V4 The InstallShield Wizard will install EasyDent V4 on your computer. To continue, click Next.			
< <u>Back</u> Cancel				

E. Check' I accept the terms of the license agreement' and click Next.

EasyDent V4 - InstallShield Wizard
License Agreement Please read the following license agreement carefully.
VATECH END USER LICENSE AGREEMENT FOR VATECH SOFTWARE This VATECH End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and VATECH(Value Added Technologies Co. Ltd.), and for the VATECH software accompanying this EULA, which includes the accompanying computer software, and may include associated media, printed materials and any "online" or electronic documentation ("SOFTWARE"). By installing the SOFTWARE, you agree to be hound by the terms of this EULA. If you do not agree to the terms of this O accept the terms of the license agreement O I do not accept the terms of the license agreement
<u> ∠Back</u> <u>N</u> ext > Cancel

F. Select the installation mode.

EasyDent V4 - InstallShield Wizard	
Setup Type Select the setup type that best suits your needs.	
Please select installation mode of EasyDent4	
⊙ Basic	
O For CD-Publishing	
InstallShield	
<back next=""></back>	Cancel

G. Select the additional programs that you want to install, and then click Next.



In case of Installing this software for server PCs (DB and File servers), check all the viewers from the list to be installed.

EasyDent V4 - InstallShield Wizard	
Select Features Select the features setup will install.	X
Select the features you want to install, and deselect the features you want to install, and deselect the features and the select	eatures you do not want to install. Description EasyDent Viewer, EzX, EzCam
502.87 MB of space required on the C drive 19430.85 MB of space available on the C drive InstallShield	
<u>B</u> ac	k <u>N</u> ext > Cancel



H. Click Install to begin installation, or click Cancel to exit the wizard.



I. The installation will start automatically.

EasyDent V4 - InstallShield Wizard	
Setup Status	AN A
The InstallShield Wizard is installing EasyDent V4	
InstallShield	Cancel

The MSDE (Microsoft SQL server Desktop Engine) will be installed automatically.





J. Choose Yes, I want to restart my computer now, and then click Finish.


2 Uninstalling Software

2.1 Uninstalling EasyDent

A. Go to the Control Panel and then select Add or Remove Program.



B. Highlight the EasyDent V4 program file, then click **Remove** button.

	Currently installed programs:	Show updates	Sort by: Name		v
Change or	Adobe Flash Player 9 ActiveX	- 664 - 666			^
Remove Programs	Adobe Photoshop 7.0		Size	136.00MB	F
-	AnySensor 1.5		Size	1.00MB	
10 A	ATK0100 ACPI UTILITY				
Add <u>N</u> ew Programs	😴 CDR Intra-Oral TWAIN Driver		Size	3.14MB	
	CDR LeadTools Modules		Size	1.33MB	
	🔁 Compatibility Pack for the 2007 Office system		Size	63.66MB	_
ld/Remove Windows	ј рст		Size	1.02MB	
omponents	S DUZON ERP M3		Size	519.00MB	
	🚰 EasyDent V4		Size	4.12MB	ſ
	Click here for support information.				h
t Pr <u>og</u> ram ccess and Defaults	To change this program or remove it from your con	nputer, dick Change or Remove.	Change	Remove	
Deraurus	EzPaX-plus		Size	2.28MB	/
	EzX-plus		Size	2.01MB	
	EzX-plus		Size	2.00MB	
	🕞 FairStars Audio Converter 1.52		Size	2.80MB	
	Formtec Design Pro 7		Size	37.20MB	
			Size	19.33MB	

2.1 Uninstalling EasyDent

C. Choose Yes, I want to restart my computer now, and then click Finish.



2.2 Uninstalling Microsoft SQL Server Desktop Engine

2.2 Uninstalling Microsoft SQL Server Desktop Engine

- A. Go to the control panel and locate the MS SQL Server Engine.
- B. Focus it and click **Remove**.



2.3 Deleting the EasyDent4 and MS SQL Folders

A. Turn off the File Server.





2.3 Deleting the EasyDent4 and MS SQL Folders

B. Delete **EasyDent4** folder at drive C:\Program Files.



C. Delete MS SQL folder at C:\Program file\Microsoft SQL Server\MSSQL.



3 FAQ

3.1 EasyDent V4 doesn't run after installation

Q: Upon installation an error message occurred and EasyDent V4 didn't run after installation.

A : The problem is caused by a failed installation of the MSDE(Microsoft SQL server Desktop Engine) with a variety of factors. Please check the PC, as shown below, and reinstall MSDE.

Case 1: If the MSDE was already installed in the PC

Check the installation

Click Start \rightarrow Setting \rightarrow Control Panel \rightarrow Add or Remove Programs.

🐻 Add or Re	move Programs	
C <u>h</u> ange or Remove	Currently installed programs: Show updates	Sort by: Name
Programs	🔀 EasyDent V4	Size 3.38MB
Add <u>N</u> ew Programs	局 Microsoft SQL Server Desktop Engine <u>Click here for support information.</u> To remove this program from your computer, click Remove.	Size <u>70.17MB</u> Used <u>rarely</u> Remove
Add/Remove <u>Wi</u> ndows Components		
Set Program Access and Defaults		

If the previously installed MSDE is not needed, remove it and reinstall EasyDent V4.

3.1 EasyDent V4 doesn't run after installation

Case 2: In case EasyDent V4 needs to be re-installed

The operation is the same as Case 1.



Please back up first the existing data, if any, before reinstalling EasyDent. To back up the data, three subdirectories—*DB*, *File Server* and *ImageBackup* in EasyDent4 directory— must be backed up.

3.2 Can't link to DB server via the network (Windows XP)

Q: Why can't I link to DB server via the network?

A: This could usually happen when the connection from the outside network to the DB server (MSDE) could not be established because of a Windows Firewall blocking port access.

To solve this kind of problem, disable the Firewall function, as shown below.

A. Go to Start \rightarrow Setting \rightarrow Control Panel \rightarrow Network and Internet Connections \rightarrow Network Connections. Click Change Windows Firewall settings.



B. Go to Exceptions tab, and then click Add Program.

🖗 Windows Firewall 🛛 🔊	K
General Exceptions Advanced	
Windows Firewall is blocking incoming network connections, except for the programs and services selected below. Adding exceptions allows some programs to work better but might increase your security risk.	
Programs and Services:	
Name	
File and Printer Shaing Periode Assistance Remote Desktop UPnP Framework	
Add Program Add Pgrt Edt Display a polification when Windows Firewall blocks a program	
What are the risks of allowing exceptions?	
OK Cancel]

3.2 Can't link to DB server via the network (Windows XP)

C. Click **Browse**. Select the item that cancels the firewall [C:\Program Files\Microsoft SQL Server\MSSQL\Binn\sqlservr.exe].

Browse				? 🛛
Look jn:	🚞 Binn	~	G 🦸 🖻	•
My Pacent Documents Desktop My Documents	My Recent Do My Documer My Compute My Compute My Compute My Compute My Compute My Compute Micror My Compute Micror My Communic Shared Do Shared Do My Documer My Network	nts r (C:) Files SQL and AGE (D:) AD (E:) AD2 (F:) wouments events		
	File <u>n</u> ame:	sqlservr.exe	~	<u>O</u> pen
My Network	Files of type:	Applications (*.exe;*.com;*.icd)	~	Cancel

D. Check the item for cancellation. And then click **OK**.

Add a Program 🛛 🗙	
To allow communications with a program by adding it to the Exceptions list, select the program, or click Browse to search for one that is not listed.	
Programs:	
Internet Reversi	
Minesweeper	
MSN .	
3 Outlook Express	
Pinball Solitaire	
Spider Solitaire	
🔤 sqlservr.exe	
3 Windows Messenger	
🕲 Windows Movie Maker 🛛 🚽	
Path: C:\Program Files\Microsoft SQL Server\MSSQ Browse	
Change scope OK Cancel	
Windows Firewall is blocking incoming network connections, exc programs and services selected below. Adding exceptions allows to work better but might increase your security risk. Programs and Services:	
Name	
File and Printer Sharing	
Remote Assistance	
Remote Desktop salservr.exe	
UPnP Framework	
Add Program Add Port Edit	<u>D</u> elete
Display a notification when Windows Firewall blocks a program	ı
What are the risks of allowing exceptions?	
OK	Cancel

E. Restart PC.

4 Patching for EasyDent Dicom Print

- A. Install the EasyDent Dicom Print Patch. Patch File: EasyDent_DP_Patchxxxxx.exe.
- B. As shown below, when the EasyDent4 (Patch for EzDicomPrint) runs, click the Next button.



C. Select the installation type (Complete or Custom) and then click Next.

Note that the Installation method is same for both Complete and Custom type.

EasyDent4 (I	Patch for EzDicomPrint) - InstallShield Wizard 🛛 🛛 🔀
Setup Type Select the setu	up type to install.
Please select	a setup type.
Complete	All program features will be installed. (Requires the most disk space.)
	Select which program features you want installed. Recommended for advanced users.
InstallShield	< <u>B</u> ack <u>N</u> ext > Cancel

D. Check the installation category as shown below, and then click Next.



E. Click the **Finish** button to complete the installation of the EasyDent Dicom Print Patch.

EasyDent4 (Patch for EzDicomPrint) - InstallShield W	izard 🛛 🔀
Setup Status	
EasyDent4 (Patch for EzDicomPrint) is configuring your new soft	ware installation.
RegSvr 32	×
DllRegisterServer in C:\EasyDent4\Report\O	CX₩EVPrint.ocx succeeded.
InstallShield	Cancel



Plugging the Master Lock Key

F. Now plug in the Master lock key to enable the use of the DICOM Print function. The method of using EzDicom Print is explained in detail **in chapter 12 DICOM Print & Report**.

Validating the License

G. When the Master key is plugged, a *License Validation for EzDICOM* window will appear.





H. Sent the key value to either the EasyDent team or the sales representative for activation.

License	e Validation for EzDICOM
Key Genera	ation
Key :	001CC4A1EC8E
License	Code :
License	Code Data :
	ок

Ex) The report form should be simple, as shown below.

Country: Republic of Korea

Dental Clinic: xx Dental Clinic

Equipment: Picasso-Trio or Pax-500ECT

Key: 001CC4A1ECBE

Sales Rep. or Requesting Client: XXX

- I. If you send an email to the EasyDent Team or to your sales representative with the above format, the **License Code** and **License Code Data** file will be sent to you.
- J. Please enter the License Code number (32 characters) you have received in the License Code field.

R License Validation for EzDICOM	X
Key Generation	
Key: 001CC4A1EC8E	
License Code :	
92301e9bbffa67c77c2d809e1220405e	
License Code Data :	
	ок

K. Please copy the License Code Data into the path shown below:

Copy Path: "C:\EasyDent4\EdpV4\"

L. Click the path configuration button and select the path where you have copied your License Code Data.

R License Validation for EzDICOM	
Key Generation	
Key : 001CC4A1EC8E	
License Code :	Click this button to find
92301e9bbffa67c77c2d809e1220405e	
License Code Data :	directory
ОК	

Open					? 🔀
Look in:	C EdpV4		•	• 🗈 💣 📰 •	
My Recent Documents Desktop My Documents My Computer	Cash CropTemp DicaFiles Doc Help Implants Import Canguage Picture Slide Slide SnapShot temp	001CC4A1EC8E			
My Network Places	Object name:	 Reg data File (+,dat)		•	Open Cancel
		linea entre citado			

Make sure that the path is correctly established and click **OK**, as shown below.

<table-of-contents></table-of-contents>	
Key Generation	
Key: 001CC4A1EC8E	
License Code :	
92301e9bbffa67c77c2d809e1220405e	
License Code Data :	
C:\EasyDent4\EdpV4\001CC4A1EC8E.dat	<u> </u>
	ок

M. The message "Success" will pop-up, signifying that the process has been successfully completed.

LicenseForEzDICOM 🔀		
♪	SuccessIII	
<u>OK</u>		

Now the validation process is over. EasyDent will enable the user to use the DICOM Printer. The details on how to use the EzDicom Print is explained in **chapter 12 DICOM Print & Report**.

NOTE

5 Icons

File

Button	Hotkey	Meaning
		Open
		Save As
2		AnyChart
		Analysis
ø		Dental CT
â		Panorama / Cephalo
2		Intraoral Sensor
3-		Intraoral Camera
		Digital Camera
4		Export to E-mail
→ []		Exit

Edit

Button	Hotkey	Meaning
ŝ	Ctrl+Z Alt+BACKAPACE	Initialize

View

Button	Hotkey	Meaning
2=	Ctrl+Z Alt+Backapace	Information of the Image
1		Exif Information
		Memo

Database

Button	Hotkey	Meaning
		Patient
		Image
2		Export
B		Import Files

Draw

Button	Hotkey	Meaning
Q		Free Draw
\mathbf{X}		Line
		Dotted
		Thin
-		Medium
-		Bold
\sim		Poly-Line
		Rectangle
0		Ellipse
*		Delete All

Measure

Button	Hotkey	Meaning
14		Distance
T _a r		Continuous Distance
P_{OP}		Angle
ā		Calibration by Model
		User Calibration
		Delete All

Image

Button	Hotkey	Meaning
F		Invert
11		Sharpen
		Sharpen more
111		Median
		Gray Scale
		Coloring
		Film Effect
1 7		90 clockwise
<u>4</u> 1		90 counterclockwise
\leftrightarrow		Flip Horizontal
1		Flip Vertical
42		Rotation & DB Save
*		Zoom In/Out
899		Move
9		Adjust

Tool

Button	Hotkey	Meaning
9		Magnifier
EQ,		Magnifier LE
\$		Slide
<u>55</u>		Profile
		Dual Monitor
· 淡		Auto Whitening
		Area Whitening
1		Brush

Implant

Button	Hotkey	Meaning
*		Add Implant
**		Delete All Implant
8		Add Implant Crown
8		Delete All Implant Crown

Window

Button	Hotkey	Meaning
IB		Main Screen
		Extended Screen
	Alt+Enter	Full Screen
		One window
		2 (2*1) Windows: two split windows horizontally
		2 (1*2) Windows: two split windows vertically
		3-Window Type – A: three split windows
		3-Window Type – B: three split windows
		4 (2*2) Windows: four split windows
		6 (3*2) Windows: six split windows
		6 (2*3) Windows: six split windows
		9 (3*3) Windows: nine split windows

Help

Button	Hotkey	Meaning
		Information about EasyDent V4 Viewer
×		Configuration



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