Prof.Suni

Version 3.5

Digital Imaging

Suni Imaging Microsystems

GETTING STARTED MANUAL

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Prof.Suni

Getting Started Manual

WHAT'S INCLUDED

The Getting Started manual provides an introduction to the basic functions of **Prof.Suni**, the industry's most comprehensive dental image management program. Out of necessity, some sections of this manual are more detailed than others due to the depth of image enhancement capable in **Prof.Suni**. However, the intuitive **Prof.Suni** interface will enable you to quickly learn the various functions of the program

TUTORIAL & TRAINING

Apteryx, Inc. will make available a comprehensive **Prof.Suni** tutorial that provides detailed step-by-step instructions on image enhancement, image operations and patient management. Contact Apteryx Sales on tutorial availability.

Additionally, in depth training is available either at your site or other location. An Apteryx representative will train a single user or a staff on **Prof.Suni** or associated products. Contact Apteryx Sales for more information on the **Prof.Suni** tutorial and training.

Installing Prof.Suni

The topics in this chapter include:

- System Requirements
- Trial or Demo Versions
- Upgrading From an Earlier Version
- Upgrading From a Trial or Demo Version
- Before you Install **Prof.Suni**™
- Settting up on a Network
- Installing **Prof.Suni**
- Troubleshooting the Installation
- Running **Prof.Suni**
- Uninstalling **Prof.Suni**

SYSTEM REQUIREMENTS

The following table outlines the recommended system requirements for installing and using **Prof.Suni**.

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EQUIPMENT	REQUIRED	RECOMMENDATION
Operating system	•	Windows 95 or higher
Computer	•	200Mhz Pentium or equivalent, a compatible mouse, and 16-bit or higher SVGA graphics display, CD-ROM drive
Computer memory	•	At least 32 MB; 128 MB recommended
Hard disk space	•	At least 20 MB
Removable storage		3.5" floppy drive, Iomega Zip drive, CD-ROM writer or other removable media
Printer		Any printer compatible with Windows 95 or higher. Printer resolution should be 600dpi or higher.
Modem		Any modem compatible with Windows 95 or higher (56K preferred)
Scanner		Any TWAIN compliant scanner.
Image capture card		Any TWAIN compliant capture card.
Internet connection		Internet service provider connections. Requires dial-up networking to be setup on your computer.

TRIAL OR DEMO VERSIONS

The first time you attempt to run a **Trial Version** of **Prof.Suni** you will be notified that you have 30 days remaining on your demo. You will be able to use all functions of **Prof.Suni** for 30 days. When the expiration date passes, you will no longer be able to use the application (the application will not start). Be sure to contact your Sales Representative prior to the expiration so that you may continue working with **Prof.Suni** uninterrupted. The expiration date may be found on About dialogue in the **Prof.Suni** Trial Version. The About dialogue is displayed by selecting the **About Prof.Suni…** option from the **Help** menu.

UPGRADING FROM AN EARLIER VERSION

If you are upgrading from an earlier version of Prof.Suni, you do not have to uninstall your previous version – the Setup program automatically detects and upgrades the previous version. In addition, when you upgrade by installing over a previous version, **Prof.Suni** retains most of your settings and customizations from your previous version. **A data conversion**

program is available from Apteryx to convert your existing Prof.Suni Version 2 patient database to the **Prof.Suni** file structure.

UPGRADING FROM A TRIAL OR DEMO VERSION

If you are upgrading from a trial or demo version of **Prof.Suni**, you do not have to uninstall your trial version – the Setup program automatically detects and upgrades the trial version. In addition, when you upgrade by installing **over** a trial version, **Prof.Suni** retains most of your settings and customizations from your previous version.

BEFORE YOU INSTALL PROF.SUNI

To ensure that you have a hassle free installation, we recommend that you follow the procedure below before you install **Prof.Suni**.

BEFORE YOU INSTALL PROF.SUNI:

1. Close all programs.

2. Install all modems and image capture hardware (e.g. scanners).

3. Check for sufficient disk space. You will require approximately 20 MB of uncompressed hard disk space in addition to the space required for the software and data files. This space is used by the Setup program for temporary installation files.

4. If you are upgrading from an earlier, a trial, or a demo version of Prof.Suni, see the appropriate "Upgrading From …" section of this manual.

SETTING UP ON A NETWORK

If you are installing **Prof.Suni** on a single computer, simply run the installation program from the CD-ROM and run the program. No specialized settings are required.

Prof.Suni's network installation utilizes Apteryx's SIMU™ routine (Single Installation Multiple User) which only requires the program to be installed on your server once. You do not need to install **Prof.Suni** on all other PC's on your network in order to run the application. However, for each computer using **Prof.Suni** on your network (not including your

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server) you are required to purchase a PAC (Per Access Certification) license in order to run the program on those PC's.

Contact Apteryx for information on PAC licensing and network installation.

INSTALLING PROF.SUNI

The Setup program guides you though the installation process by prompting you for information.

> **For detailed instructions, please refer to the Prof.Suni Installation Guide provided with your CD-ROM.**

> **If you are upgrading from an earlier, a trial, or a demo version of Prof.Suni:**
>
> **You may be prompted with a message indicating that a previous version of Prof.Suni already exists on your computer and asked if you want to reinstall Prof.Suni. To reinstall or upgrade Prof.Suni, click on the Yes button.**

TO INSTALL PROF.SUNI:

1. Insert **Prof.Suni** installation CD into your CD-ROM drive.

2. If the Windows AutoRun* feature is enabled on your computer, the Setup program will automatically start. If AutoRun is enabled, skip to Step 6.

> *** Windows AutoRun will automatically run the Prof.Suni installation program from your CD-ROM.**

3. If AutoRun is not enabled, click on the Windows Start button (with the left mouse button) and select Run. The Run dialogue will appear.

4. In the Open field, type …
   D:\SETUP.EXE
   …where "D" is the letter of your floppy drive.

5. Click on the OK button. The Setup program will start.

6. Follow the instructions on the screen. Click on the button to proceed.

TROUBLESHOOTING THE INSTALLATION

Installing **Prof.Suni** is easy; simply follow the instructions on your screen. However, if you encounter difficulties with the installation, see the following table for possible solutions.

SOLUTIONS	DETAILS
Check for sufficient disk space	The Setup program checks for sufficient disk space before proceeding with the actual installation. If a message appears warning that you do not have enough disk space, exit the Setup program and do any or all of the following to create additional space: • Empty the Recycle Bin on the Window's desktop. • Delete temporary files from your TEMP directory. • Uninstall programs that are no longer required. • Delete data files that are no longer required.
Close all Prof.Suni programs	If any of the Prof.Suni files are in use, you cannot install the new version of the program. Make sure that all Prof.Suni programs are closed, including **Prof.Suni Trial Version**.
Terminate any anti-virus programs	If you have any anti-virus programs running, terminate them before installing Prof.Suni.

RUNNING PROF.SUNI

The **Prof.Suni** installation program sets up both a folder in your START menu and places an icon on your desktop (both of which may be used to start **Prof.Suni**). You may start the **Prof.Suni** application by double clicking on this icon with your left mouse button.

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To create a Windows shortcut to the **Prof.Suni** program on other computers, right-click on an empty area on your desktop. Select SHORTCUT from the NEW… menu, and then click on the Browse button. Go to the computer and directory on which **Prof.Suni** was installed and select the XVAssistant.exe file, then click OK. Click on Next, then select Finish when Windows prompts you for a name for the shortcut. An icon will be placed on your desktop that will start the **Prof.Suni** program.

The first time you run **Prof.Suni** you will be prompted to enter information identifying you and your computer. You will also be required to enter a licensing code that is included in your **Prof.Suni** package on the registration card. Once all information is entered, click on OK and **Prof.Suni** will begin running.

UNINSTALLING PROF.SUNI

At some point, you may want to uninstall **Prof.Suni**.

TO UNINSTALL PROF.SUNI:

1. Click on the Windows START button, select Settings, and then click on CONTROL PANEL.

2. Double click on the ADD/REMOVE PROGRAMS icon. The Add/Remove Programs Properties dialogue will appear.

3. In the program list, select PROF.SUNI by clicking on it once with the left mouse button.

4. Click on the ADD/REMOVE button. The **Prof.Suni** Uninstall program will start.

5. Follow the instructions on the screen to uninstall **Prof.Suni**. If you are asked to delete common files, select NO.

Personalizing Your Setup

This chapter takes you through the process of customizing your copy of **Prof.Suni**.

PROF.SUNI'S OPTIONS

Using **Prof.Suni**'s options you are able to customize the functionality of the **Prof.Suni** application. **Prof.Suni**'s options are divided into different groups of related information. To open **Prof.Suni**'s option dialogue, select OPTIONS… from the TOOLS menu. This section will take you through the necessary steps to customize the **Prof.Suni** options.   Note that most of the options are automatically set up for you by the installation program.

GENERAL OPTIONS TAB

The GENERAL tab offers five options:

1. The "Start-up" actions define how the screen will look when you open the program. If you wish the patient card file to be present on opening (recommended) check the "Display Open Patient dialogue" option. If you want a blank desktop, leave this box unchecked.

2. The Recent Patient List should have the "keep track of recent patients globally" box checked so the program will search other files for recent patients.

3. The measurement tool will almost always require measurements in millimeters.

4. The "Undo/Redo" box allows you to define the number of "undo" and "redo" functions you wish to use. When you modify an image, for example, with noise removal, but do not like the result, and wish to "undo" that function, you can go to "Edit" on the tool bar and reverse the function. If you change your mind again, you can "redo." The number of reversals would rarely need to be greater than two. For an infinite number of UNDO and REDO functions, enter "0" in the box.

5. Microsoft Word is used to write letters with templates. Click the "search" button and the program will find the Winword.exe file (if you have Microsoft Word® installed on your computer) and insert the path in the box.

INTERFACE TAB

The **Interface** tab allows you to set color definitions. Radiographs are more easily viewed on a dark background; the recommended setting is dark gray. The other colors can be changed based on your personal preferences. Additionally, you can choose the colors for the Tooth Control window as well as the type of Tooth Control (by selecting or deselecting the Flat Tooth Control checkbox, whether to automatically hide the Popup Controls, and whether to Maximize the layout displays.)

IMAGE TAB

The **Image** tab defines resolutions. The default dpi (dots per inch) values are generally adequate, although you may prefer to change the dpi settings to your preferences. Leave the jpeg values at the highest (lowest compression, least loss) value. You may also choose the default storage file format; Apteryx recommends the Secure Tag Block format for file authenticity.

DATABASE TAB

The Database tab enables you to change the manner in which **Prof.Suni** monitors changes to the patient database. Do NOT change the setting from the default "Database Polling" setting unless you are directed to by Atperyx Technical Support.

SENSOR TAB

The **Sensor** tab is used for those practices that have installed digital sensors enabling the direct input of digital radiographs. For now, leave all sections at their default settings.

LANGUAGE TAB

The **Language** tab allows you to select the language of choice. Thirteen languages are currently available.

TOOTH CONTROL TAB

The **Tooth Control** tab defines the nomenclature format for the adult and deciduous dentitions. There are two adult and three deciduous choices. In the United States most dentists use the "Universal" system, whereas the quadrant system is used internationally. The deciduous choices are more variable, though the "Universal" system is used most frequently.

OTHER OPTIONS

The following options are all available by selecting the **Tools** menu. Each of the following will appear in the drop down menu.

LAYOUT DEFINITIONS

Layouts are essentially groupings of images arranged in specific orientations. For example, you may wish to capture a series of bitewings or periapicals and arrange them in a specific orientation. **Layout Definitions** allow the user to select the way in which images will be displayed on the desktop and the order in which they are exposed. Once the layout is selected, images are acquired in the determined order, and the images will appear on the desktop with the proper orientation and in the desired location without any operator/computer interaction. The input device does not have to be the same for each image, i.e., image #1 can be from a scanner, image #2 can be from a sensor, image #3 can be from an intra-oral camera, etc.

Several layouts are included in the Prof.Suni directory, however the user can modify or add layouts to suit the needs of the practice.

COLORIZE COLORS

The manner in which colorized images (images that were originally grayscale) will be displayed are chosen by selecting **Colorize Colors…**. Five options are available:

- **Spectrum** – The full color spectrum will be displayed.

- **Fire** – Red is the primary color.

- **Ice** – Blue is the primary color.

- **RedGreenBlue** – Colors will be displayed predominantly Red, then Green, then Blue.

- **BlueGreenRed** – Colors will be displayed predominantly Blue, then Green, then Red.

TWAIN DEVICE CONFIGURATIONS

Each TWAIN device that is installed on the computer, such as scanners, intra-oral cameras, digital cameras or digital sensors, will be displayed in the **TWAIN Device Configuration** screen. To edit a device's configuration, select the device and then click on **Edit Configuration** to change the manner in which the device acquires images. For the most part, the default settings will operate the device properly.

SENSOR UTILITIES

If you have sensors installed on your system, call Apteryx Technical Support for the specific settings for your sensors.

OTHER APPLICATIONS

In order to view images in other applications, you can specify the locations of the programs – and therefore open the program – directly from **Prof.Suni**. The default programs are Microsoft PaintBrush and Microsoft NotePad. In the case of PaintBrush, the current image will be imported into the program for viewing. In the case of NotePad, a blank window will appear enabling the input of text.

DOCUMENTS

Documents spawned from **Prof.Suni** provide a tool that is very convenient for writing referral letters, treatment plans and other documents using Microsoft Word. When a patient and image are open on the **Prof.Suni** desktop, simply click on one of the documents in the Document List under **Tools.** Your copy of Word will open, invoke a macro to build the appropriate document template, and then copy the image and all patient information into the new document. You are able to add your own logo and other text to the document in order to send a printed copy of the image to another doctor or insurance company.

Once the document is created, it can be saved back into the patient's folder in **Prof.Suni**, or scanned into the patient's record enabling you to dictate Tooth Associations and other parameters.

To insure that the Document function works properly, be sure to specify the location of MS Word in the **General** tab of the **Options** menu described earlier.

Getting Started

In this chapter, you will become familiar with using some of the more popular features of the **Prof.Suni** application. Most of the instructions in this section use the sample files that were installed with the **Prof.Suni** application. If you selected the Minimum installation type, then the sample files will not be found on your hard drive. Most of the tutorials in this section rely on performing operations on duplicate images. Through the use of duplicates, you will not accidentally overwrite any of the sample image files. Topics covered in this chapter include:

- On-line Help
- Control Windows
- Basic Image Handling, including opening Images and Patients
- Scanning and Acquiring X-Ray Images
- Printing Images
- Scan2Print

ON-LINE HELP

Prof.Suni comes with extensive on-line help. Using the on-line help, you are able to get a more in depth explanation of **Prof.Suni**'s features. **Prof.Suni**'s on-line help is available by selecting HELP CONTENTS from the HELP menu.

TOOLBOX CONTROL

The Toolbox contains icons that access the image enhancement, labeling, notation and acquisition functions. Toolbox icons will be referenced frequently in the sections to follow.

> **The Prof.Suni Toolbox refers to the icon box that typically resides on the right side of the Prof.Suni desktop. Each time the Toolbox is noted it will be capitalized and refers to the Toolbox on the right side of the program. Any mention of the toolbar refers to the area at the top of the Prof.Suni application on which typical Windows icons are placed.**

Additionally, you may select two different Toolbox sizes. Under the WINDOW, CONTROL WINDOWS menu, choose the Small Toolbox. If the

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Small Toolbox option is <u>not</u> checked, the Large Toolbox will be displayed. Under the same menu, you may also choose to hide the Toolbox.

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POPUP CONTROLS

Four dialog boxes are "docked" on the right side of the **Prof.Suni** desktop, which maximizes the desktop space for images while still enabling quick access to the functions. The four Popup Controls are:

1. **Toolbox** – The Toolbox contains icons which represent image enhancement, labeling and image capture functions. There are two columns of icons; with the exception of the top-left icon, there are icon sets accessible under each of the top-most icons. The manner in which you access the icons is discussed later.

2. **Open Patients Window** – Indicates which patients have been opened to the **Prof.Suni** desktop, if any. The Open Patient Window always includes a patient called Nobody, which is explained later.

3. **Tooth Control Window** – The Tooth Control window (which replicates a tooth chart) enables you to open images relating to specific teeth. The Tooth Control window can be changed from an Adult chart to a Deciduous chart. Additionally, the type of chart can be changed from a Flat style to the Arched style.

   The Tooth Control Window will only be accessible if you are working with a patient's x-rays or other grayscale images. If you are working in "Nobody" (explained later) the Tooth Control will not be accessible since images should not be modified or enhanced unless the image you are working with is opened from a patient's file.

4. **Brightness/Contrast Control** – The most frequently used tool in **Prof.Suni**. The Brightness/Contrast Control enables real-time adjustments to an image that originally may have been too dark or too light. The Brightness/Contrast control will not be accessible if there are no images open in a patient.

To access the Popup Controls, position the mouse cursor over the control; the cursor changes into an arrow and eyeglass pointing to the left. Click with the left mouse button in the blue area to pop out the control. To dock the control into the display bar, position the cursor over the left or right edge of the control window and click with the left mouse button.

The Controls can be resized using common Windows methods. Move the cursor over an edge of the Control window until it changes into a double arrow. Click and drag the Controls to the appropriate size.

Depending upon your selection in the Options menu, the Popup Controls will either automatically hide once you've made a selection or will remain on the desktop.

TOOLBAR OPTIONS

The toolbar, the row of icons at the top of the **Prof.Suni** desktop, can display either large or small icons. You can change the toolbar icon size by clicking on **Window, Control Window.** Click on **Use Small Toolbar** to place a checkmark next to the option or to remove the checkmark. The toolbar size will be changed.

BASIC IMAGE HANDLING

In this section, some of general image file and image handling features of **Prof.Suni** are explained.

TOOLTIPS

Every toolbar and Toolbox button has associated with it a tooltip and flyby text:

- A **Tooltip** is a short description that appears by your mouse cursor whenever you pause over a toolbar button.

- **Flyby Text** is a longer, more detailed description that appears on the application status bar whenever your mouse cursor passes over a toolbar button.

IMAGE WINDOWS

Prof.Suni allows you to view more than one image at a time. Each image is contained in its own image window. When editing images, it is important to note that only the currently selected image will be affected by image operations. Usually, the currently selected image will be indicated by a blue title bar. The title bar is the area at the top of the

image window that displays the name of the image. To switch between the different image windows, you should click on the title bar (or any other part) of the image window.

> **Image windows may be moved anywhere in the Prof.Suni application window by clicking and dragging on an image's title bar with the left mouse button.**

BRIGHTNESS/CONTRAST CONTROL

The most commonly used tool in **Prof.Suni** is the **Brightness/Contrast** Control. The Brightness/Contrast control enables quick, real-time adjustments to the image brightness.

The Brightness/Contrast control contains two slider bars – one on the bottom and one on the right side of the control. The "+" sign in the center of the control window indicates the amount of brightness and contrast adjustment on the image.

To change the brightness and/or contrast of the image, click and drag one of the slider bars. Brightness and contrast can be adjusted together by directly dragging on the "+" in the center of the control window. To return the image to its original appearance, click with the right mouse button on the center of the control window.

Manual Brightness, Dynamic Range adjustments, Equalization and Level Adjustment functions are available in the Toolbox and under the **Enhancement** menu. Each of these functions is explained in more detail in the **Image Operations** section.

UNDO/REDO

Just like other applications, **Prof.Suni** provides you with undo and redo features. You may undo or redo operations by:

- Using the keyboard shortcuts (originally set to **CTRL+Z** for undo and **CTRL+Y** for redo).

- By clicking on the undo/redo Toolbox buttons .

- By selecting **UNDO** or **REDO** from the **EDIT** menu.

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ACCESSING ICONS IN THE TOOLBOX

The Toolbox contains more than just the 12 icons that are normally visible. The icon that is visible in each of the 12 sections of the Toolbox represents the types of functions available within that section. Most of the functions are also accessible from the drop down menus along the top of **Prof.Suni**'s interface.

With the exception of the top left icon in the Toolbox (the Pointer icon) each icon contains a black triangle in the lower right hand corner indicating additional icons – and therefore functions – are available underneath. Click on the black triangle to reveal the other icons. You can also click and hold on the top icon to reveal all others in that section.

Each icon has a Tooltip and Flyby Text that indicates the function for that icon.

OPENING IMAGE FILES

Several sample image files were installed during the **Prof.Suni** application in the John Doe and Jane Doe patient folders. Opening images in general is done by selecting OPEN… from the FILE menu.

> **It is recommended that you open images into a patient – rather than directly – using the following steps. You can open an image without opening it into a patient if you simply want to print or transmit the image without associating the image to a patient. The process is explained a little later.**

TO OPEN SAMPLE IMAGES:

1. Click on the OPEN button or select OPEN… from the FILE menu. The Open File dialogue will appear.

2. Select your "C:" drive (or the drive that was selected when installing the program). Double-click on Program Files, then Apteryx.

3. Double click on the "XVAssistant" directory with the left mouse button.

4. Double click on the Patients directory.

5. Choose a patient folder, then click on one of the sample images with the left mouse button. Click the Preview button to the right; the image will appear in the Preview window. Select

another image if you wish. If the image is the one you want, proceed with the next steps. **Note:** The sample images include tooth associations.

6. To open more than one image, press and hold the <Ctrl> key on the keyboard while also single-clicking on additional images.

7. Click on the **OPEN** button to open the file(s). The images will appear in **Prof.Suni**.

The *Open Patients* window will now display the patient's name highlighted in blue.

OPENING PATIENTS

Four methods can be used to open patients. Depending on your working style (and whether you have installed Apteryx's NameGrabber™ application), you may prefer one method over the others.

• If you prefer icon-based navigation, click on the button located on the toolbar.

• For menu-based navigation, click on **PATIENT**, then **OPEN PATIENT.** You can also choose a recently opened patient by clicking on **PATIENT, RECENT PATIENTS…** and select a patient from the list (arranged in descending order beginning with the most recently opened.)

• Right-click on the application background and choose **OPEN PATIENT** or **RECENT PATIENTS…**.

• If you have installed **NameGrabber** in order to capture patient names and other information from your practice management software, simply click on the **NameGrabber** icon in the Windows system tray (near the clock in the lower right corner.) If the patient already exists, Prof.Suni will proceed directly to the patient's folder. If the patient does NOT exist in the Prof.Suni database, you will be prompted to confirm the patient's name, SS and ID numbers, and then click **Add**.

In each method (except the **Recent Patients** dialog, since you opened the patient directly, or the **NameGrabber** process), the **Patient Index** dialog box will display a list of patients in a series of alphabetical, ascending tabs. Use the scroll bar on the right of the dialog box to move through the patients. Click on the appropriate patient and then click on **Open Patient.**

To quickly access a patient, type the first couple of letters of the patient's last name in the Last Name text box. Prof.Suni will move to that section of the patient database. Click on the patient's name, then click the *Open Patient* button.

The patient's name will appear in the **Open Patients** control window. If the **Tooth Control** window was not accessible, it will be available now.

You can open images for the patient using two methods:

• The **Open Image** dialogue described earlier, and

• Open images by **Tooth Association** method described below.

SWITCHING BETWEEN PATIENTS

Prof.Suni allows you to have multiple patients and any of their images open at the same time. You can switch between patients simply by clicking on their name in the Open Patients control window. The following exercise using sample patients and images will show you how to switch between patients.

1. Open **Jane Doe** as described above.

2. Open two of Ms. Doe's images. Click on **OPEN…** in the **FILE** menu.

3. Click on the **SCANNED X-RAYS** tab. Single click on the full mouth series image and the panoral image.

4. Click **DONE.** Both images will be visible on the desktop.

Open **John Doe,** then follow the same process described above to open two of Mr. Doe's images to the **Prof.Suni** desktop.

You'll notice that both **Jane Doe** and **John Doe** appear in the **Open Patients** control window. Clicking on either of their names will highlight their name in the control window and reveal their images. If you have opened enough patients – or have made the **Open Patients** control window smaller – a scroll bar will appear which enables you to scroll through the patients you have open.

You'll also notice Nobody, a name at the top of the **Open Patients** control window. Which begs the question, "Who is Nobody?"

WHO IS "NOBODY"?

Nobody is … well…nobody.

Nobody is a generic workspace in which you can perform manipulations and enhancement on images that aren't associated with a patient. There will be times that you may wish to acquire a series of images and then print them out or transmit them to an insurance company, doctor or satellite practice.

MOVING IMAGES TO ANOTHER PATIENT

Utilize the following steps to move an image from one patient to another. Depending on the steps you follow **Prof.Suni** will assign a file name to the image or you can assign the file name yourself.

IMAGE HAS BEEN ACQUIRED INTO NOBODY:

If you wish to move the image to a patient and let **Prof.Suni** assign a file name…

1. Right-click on the image while it is open in Nobody.

2. Select **MOVE IMAGE TO PATIENT…** from the **MOVE TO PATIENT** menu.

3. From the patient list choose the patient to which you are moving the image.

4. **Prof.Suni** will assign a file name to the image.

If you wish to move the image to a patient and assign a file name yourself…

1. Right-click on the image while it is open in Nobody.

2. Select **SAVE AS…** from the **SAVE** menu.

3. Choose the patient to which you are moving the image from the Save in… drop down box.

4. Assign a name in the File name… box.

5. Click **OK**

IMAGE HAS BEEN ACQUIRED INTO THE WRONG PATIENT:

If you wish to move the image to a patient and let **Prof.Suni** assign a file name…

1. Right-click on the image while it is open in the incorrect patient.

2. Select **MOVE IMAGE TO PATIENT…** from the **MOVE TO PATIENT** menu.

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3. From the patient list choose the patient to which you are moving the image.

4. **Prof.Suni** will assign a file name to the image.

If you wish to move the image to a patient and assign a file name yourself…

1. Right-click on the image while it is open in the incorrect patient.

2. Select SAVE AS… from the SAVE menu.

3. Choose the patient to which you are moving the image from the Save in… drop down box.

4. Assign a name in the File name… box.

5. Click **OK**

ADDING A PATIENT

The **Add a Patient** dialogue is accessed in a manner similar to Opening a Patient.

• If you prefer icon-based navigation, click on the button located on the toolbar.

• For menu-based navigation, click on **Patient**, then **Add Patient…** or press **<Ctrl+Shift+A>**.

• Right-click on the application background and choose **Add Patient…** from the **Patient Functions** dialogue.

The **New Patient** dialogue box has four fields in which to add text.

• Last Name
• First Name
• SS Number
• ID Number

Fill in the appropriate information, then click **ADD.**

When using NameGrabber in conjunction with your practice management software, you will be asked to confirm the patient's name, SS and/or ID numbers if the patient has not been previously added to Prof.Suni. When you are satisfied with the patient information, click **Add** and the patient will be added to the Prof.Suni patient database.

OPENING IMAGE FILES USING TOOTH ASSOCIATIONS

To open a patient's image using Tooth Associations, first open the appropriate patient. by selecting OPEN PATIENT… from the PATIENT menu. You can also choose RECENT PATIENTS… from the PATIENT menu, and then select the appropriate patient. Additionally, you can right click on a blank section of the **Prof.Suni** desktop to access Recent Patients and the Open Patient dialog. The patient's name will now appear in the floating Open Patients box. (If the Open Patients box is not currently on the **Prof.Suni** desktop, click on the button in the Toolbar.)

TO OPEN IMAGES USING TOOTH ASSOCIATIONS:

1. In the tooth chart, click on the tooth/teeth relating to the images you wish to see. To view all images, highlight all teeth in the chart by clicking and holding with the left mouse button while dragging the cursor over all the teeth. If you are using the standard Tooth Control window, you can also single click in the center of the chart to highlight all teeth. If you have selected the Flat Tooth Control chart, use the click and drag method. The **Tooth/Teeth Related Images** dialogue box will open.

2. Thumbnail views of all images will appear in the dialogue box relating to the teeth you selected in the chart. The images will be separated by type of image, i.e., Digital X-rays, Scanned X-rays, Color Images, and Miscellaneous. Images will be sorted chronologically from newest to oldest. To open full screen views of the images without actually opening the file to the **Prof.Suni** desktop, single click with the right mouse button on the image.

3. Select one or more images to open by single clicking, then click on the OPEN button. The image(s) will appear on the **Prof.Suni** desktop.

FULL SCREEN VIEW

Full screen viewing permits you to view an image utilizing the entire screen area. This mode is very useful when you are using **Prof.Suni** on a small screen (e.g. a notebook computer) where the display area in **Prof.Suni** is very small or when displaying an image for a patient during consultation. The full screen mode provides you with general magnification and manipulation of the image.

Full screen mode is activated by selecting the button in the Toolbox or the FULL SCREEN VIEW option from the IMAGE menu. (Or right click on

an image and select **FULL SCREEN VIEW...** from the **IMAGE OPERATIONS** menu.) In the full screen mode, you have the option of magnifying and panning the image. To exit full screen mode, click on the **"X"** button in the upper right hand corner of the full screen window, click on the exit button or press the **<Esc>** key on the keyboard.

PANNING

When the whole image does not fit in the image window, you may scroll or pan the image in the window by placing the mouse in pan cursor mode.

PAN THE IMAGES USING THE MOUSE:

1. While in Full Screen View, zoom in on an image by selecting the magnify button in the Full Screen View toolbar. Click on the image with the left mouse button to increase magnification; click with the right mouse button to decrease magnification.

2. Place the mouse in pan cursor mode by clicking on the hand button.

3. Click and hold on a portion of an image with the left mouse button.

4. Move the mouse to pan the image.

5. Return the image to its original magnification by clicking on the 100% button. To make the image fit the full size of the Full Screen View window, click on the double-arrow button.

FLOATERVIEW™ WINDOWS

While using another software program you may have a need to view an image acquired in **Prof.Suni**. FloaterView windows always stay "on top" of all other programs, enabling you to view an image even if **Prof.Suni** is not the active program.

Open an image to the **Prof.Suni** desktop. Right-click on the image and select **FloaterView...** from the **Image Operations** menu. A FloaterView window will appear which contains the image, patient information and the image information. If any labels are in the original image, they will be replicated in grayscale in the FloaterView window.

The FloaterView window presents the same icons as the Full Screen View window, enabling you to pan, magnify and resize the image within FloaterView. Additionally, the FloaterView window can be moved and resized using familiar Windows functions.

- Click and hold on the title bar to move the FloaterView window on your Windows desktop.

- Hold the mouse cursor over an edge of the FloaterView window; the cursor changes to a double-arrow. Click and hold to resize the window.

SCANNING AND ACQUIRING X-RAY IMAGES

If a scanner or other TWAIN-compliant device is already attached to the computer on which **Prof.Suni** is installed, **Prof.Suni** will automatically recognize the device and configure its general settings. (Before booting up Windows, turn on the power to the scanner and transparency adapter to ensure that your operating system "sees" the device).

TO CAPTURE AN IMAGE FROM A SCANNER:

1. Place the x-ray or other media on your scanner in the top center of the scan bed. (The 'top' is the end of the scanner in which the scan head is parked when idle.)

2. Select **Capture Single Image…** from the **Acquire** option in the **File** menu. (You can also press **<Ctrl+T>** on your keyboard or click the Camera button in the Toolbox). A dialog box will prompt you to choose which type of image you wish to capture (Scanned X-Ray, Scanned Document, Scanned Image, Miscellaneous, and an assortment of Digital images.)

3. Click on the "Scanned X-Ray" tab.

4. From the drop down box choose the image source (i.e., scanner, digital camera, intra-oral camera, etc.)

5. Place a check mark in the box next to "Automatically Acquire".

6. Next, choose which type of x-ray you wish to scan. **Prof.Suni** is pre-configured to scan periapical, bite-wing, full-mouth series, panoral or ceph x-rays. Single-click on the appropriate image type.

7. Choose whether you wish to capture a grayscale or full color image. Choose the grayscale option for all x-rays. The resolution is automatically set to a default resolution that provides the sharpest image while conserving memory and disk space. If you wish to change the resolution, click on the drop-down list and choose a resolution between 50 and 1200 dpi.

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8. Click on the **OK** button. If this is the first time you have used
    this imaging device, **Prof.Suni** will ask you to fill in some
    general information about the imaging device. The defaults will
    provide the best performance except for special hardware
    configurations. Click on the **OK** button to accept the default
    settings (they can be changed at any time).

**The process for acquiring other images, such as docu-
ments and color photos, is similar. Simply choose the
appropriate tab and select the options required for
that image.**

**Each tab can have a different image source. For
instance, if you chose a Microtek scanner for your
scanned x-ray, a Kodak digital camera for a digital
image and a Welch Allen camera for intra-oral color
images, Prof.Suni will remember which device you
used to acquire each type of image. This feature pre-
vents you from having to select a source each time
you acquire an image.**

PRINTING IMAGES

Printing images from **Prof.Suni** is similar to other Windows printing methods, but you are able to include **Prof.Suni** image information.

The Print dialogue is accessible four ways:

- Select **PRINT...** from the **FILE** menu.
- Click on the Printer icon in the toolbar.
- Right-click on the image and select Print…
- Press **<Ctrl+P>.**

The Print Image dialogue box will open. From the Print Image dialogue, choose the text you would like to print along with the image from three different tabs: **General, Image Text**, and **Header/Footer.**

> **At the bottom right of each tab, click on the More>> button to reveal a scrolling dialogue that explains the options specific to that tab.**

From the **General** tab, access the Setup Printer dialogue, choose the printer, the image size and indents.

From the **Image Text** tab, specify the text and font style for the printed image. Note that when the Specified Text option is selected, you can type in text to be included with the image or select previously-saved text. Click on **Save Text** to save text you've entered in the text field.

The **Header/Footer** tab contains drop-down boxes with predefined fields such as patient name, SS number and file name to be included in the Header and Footer areas. Choose the appropriate text for each area and whether or not you want separator lines between the header or footer and the image. Highlight the option and press your BACKSPACE KEY if the area should be blank.

> **You can save your selections by clicking on Save Def to name and save your selections with a specific file name (for instance, "Dr. Smith's printouts.")**

SCAN2PRINT

In order to quickly capture an image from your scanner and make a hard copy printout, **Prof.Suni** includes **Scan2Print.** Scan2Print will quickly output a copy of an image by bypassing the normal image acquisition interfaces. Additionally, you will not have the option to include predefined text fields on the printout as you do during the normal Print Image dialogue.

TO INVOKE SCAN2PRINT:

1. Place an image on the scanner.

2. Select **Scan2Print** from the **File** menu or click on the Scan2Print button in the Toolbox. The Scan2Print dialogue box will open.

3. Select the scanner from which you will be acquiring the image in the **Image Source** drop down box.

4. Select the printer you wish to send the printed image to from the **Print Image To** dialogue.

5. If you wish to have **Prof.Suni** handle the image specifications, click on **Automatically Acquire**.

6. Choose the type of image you will be scanning by clicking on the appropriate buttons (black and white, grayscale, 256-color, or full-color.)

7. Choose the resolution from the drop down box.

8. Choose the type of media: Transmissive for x-rays; Reflective for all other media; or Auto to allow **Prof.Suni** to determine media type.

9. Press **Scan2Print**. The image will be acquired by the scanner and then output on the selected printer.

Image Operations

This chapter guides you through **Prof.Suni**'s image enhancement functions.

CURSOR MODES

Prof.Suni enables you to accomplish a variety of tasks using your mouse. **Prof.Suni** associates a *cursor mode* to identify what operation is currently associated with the mouse (for example, the cursor mode identifies whether a press of the left mouse button should be interpreted as a placement of a label in an image or as a magnification of the image).

The current cursor mode is set most commonly by clicking on one of the buttons on the Toolbox. These modes are also available in the menus, but more commonly, the toolbar or Toolbox approach is used.   Throughout this manual, you will be switching between cursor modes in order to accomplish a variety of tasks.

OPENING IMAGE FILES

Several sample image files were installed during the **Prof.Suni** application in the John Doe and Jane Doe patient folders. Opening images in general is done by selecting **Open ...** from the **File** menu.

It is recommended that you open images into a patient – rather than directly – using the following steps. You can open an image without opening it into a patient if you simply want to print or transmit the image without associating the image to a patient. The process is explained a little later.

TO OPEN SAMPLE IMAGES:

1. Click on the Open button or select **Open ...** from the **File** menu. The Open File dialogue will appear.

2. Select your "C:" drive (or the drive that was selected when installing the program).

3. Double click on the "XVAssistant" directory with the left mouse button.

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4. Double click on the Patients directory.

5. Choose a patient folder, then click on one of the sample images with the left mouse button. Click the Preview button to the right; the image will appear in the Preview window. Select another image if you wish. If the image is the one you want, proceed with the next steps. **Note**: The sample images include tooth associations.

6. To open more than one image, press and hold the **<Ctrl>** key on the keyboard while also single-clicking on additional images.

7. Click on the **Open** button to open the file(s). The images will appear in **Prof.Suni**.

The Open Patients window will now display the patient's name highlighted in blue.

CLOSING AN IMAGE

Closing images removes them from the **Prof.Suni** work area. When you close a modified or new image, **Prof.Suni** will ask you if the image should be saved (so that you do not accidentally discard valuable images).

TO CLOSE AN IMAGE:

1. Either choose **Close** from the **Window** menu or click on the button located in the upper right hand corner of the image window.

2. When you are prompted to save the modified image, click on the **Discard** button if you do not wish to save your changes to the image.

SAVING AN IMAGE

Each patient image is automatically saved into the patient's record.

SAVE THE IMAGE:

1. Three options are available to save an image: **Save…, Save As…,** and **Export.**

2. If you choose **Save…** on an image that has not been saved previously, **Prof.Suni** will automatically assign a name to the image. If you choose **Save…** on an image that *has* been saved previously, **Prof.Suni** will ask if you want to overwrite the original file. If you choose Yes, the new file will include any changes, including added labels or notes.

3. **Save As…** prompts you to assign a new name to the image file. Use **Save As…** to keep the original intact and save the new file with any changes or additions under a different name.

4. **Export…** strips the image of any labels, markers, notes and other information. You would typically choose **Export…** if you wanted to open the image in another image processing program.

5. Click on the Save button button or select **Save …** or **Save As…** from the **File** menu. The Save dialogue will appear. The Save dialogue is also available by right-clicking on the image and choosing **Save, Save As**, or **Export.**

6. Enter a file name in the **File name** field; choose the file type from the list in the drop down box. Choose the location to which you wish to save the file from the drop down box.

7. Click on the **Save** button. The file will be saved to the chosen location.

> **There are two types of save operations: "Save" and "Save As".**
>
> **The Save option in the File menu (or the button) is used to save an image back to the same file from which it was read. Note that this option overwrites the original copy of the image!!**
>
> **The Save As … option in the File menu (or the button) is used to save an image in a different file. This option preserves the original copy of the image!!**

SPOT ENHANCEMENTS

Under the **Actions** menu and in the Toolbox are four Spot Enhancement features that enable you to highlight a specific and smaller area of an image for special evaluation. The four functions are **Spot Inverter**, **Spot Magnifier**, **Spot Enhancer** and **Spot Colorizer**.

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Once one of the functions is invoked, simply click and hold with the left mouse button on the image. While continuing to hold the mouse button, move the cursor around the image to see the changed area of the image. The right mouse button allows you to change the size of the circle or -in the case of the Spot Magnifier – the box that highlights an area of the image. You have a choice of four circle sizes.

For the Spot Magnifier, an additional window opens which offers you a choice of four different magnification levels. The "call out" window will display the magnified image area at up to four times magnification.

The colors that are displayed in the Spot Colorizer can be changed. Click on **Colorize Colors…** in the **Tools** menu to change your preferences.

ENHANCING CONTRAST

Prof.Suni provides you with a wide range of image improvement tools (most of which are available in the **Actions** or **Image** menus).

EQUALIZE THE IMAGE:

1. Open a sample image if no images are currently open.

2. Dramatically adjust the Brightness and Contrast using the Brightness/Contrast tool.

3. Equalize the image by clicking on the button in the Toolbox or by selecting the **Enhancement** menu, **Brightness/Contrast…** and then clicking on **Equalize.** The image is automatically equalized.

MANUALLY ADJUST THE BRIGHTNESS AND THE CONTRAST OF IMAGE:

1. Click on the **Undo** button to undo the equalization on the image.

2. Click on the button in the Toolbox or select **Brightness /Contrast …** under the **Enhancement…Brightness/Contrast** menu. The Brightness/Contrast dialogue window appears.

3. Set the **Brightness** to **43** by either using the sliding bar, the up and down arrows, or manually typing in the value. A preview of the operation appears in the Preview window. To see other sections of the image, click on the button and move the image in the left hand window. That section will appear in the Preview window

4. Set the **Contrast** to **100** by either using the sliding bar, the up and down arrows, or manually typing in the value. A preview of the operation appears in the Preview window.

5. Click on the **OK** button. The image is adjusted. *Still not a great image yet?!*

6. Click on the **Normalize** button in the Toolbox or select **Normalize…** under the **Enhancement…Brightness/Contrast** menu. The image is automatically normalized.

7. Close the image by clicking on the button located in the upper right hand corner of the image window.

> **The Brightness-Contrast feature is a manual adjustment feature. This feature requires that you manually change values to obtain a desirable image. The Normalize and Equalize features are automatic adjustment features. When you select one of these features, the image is automatically adjusted by the Prof.Suni application.**

APPLYING DYNAMIC RANGE COMPRESSION TO THE IMAGE:

1. Open an image to the **Prof.Suni** desktop.

2. Perform Dynamic range compression on the image by clicking on the button in the Toolbox or by selecting **Darken Dynamic Range** under the **Enhancement…Brightness/Contrast…** menu. The Darken Dynamic Range dialogue window appears.

3. Enter a value of **25** for the degree. *The image will automatically update in the Preview window.*

4. Follow the same process to lighten the dynamic range by selecting **Lighten Dynamic Range** under the **Enhancement…Brightness/Contrast…** menu.

5. Close the image by clicking on the button located in the upper right hand corner of the image window.

DUPLICATING AN IMAGE

A duplicate image is simply an identical copy of another image. Duplicates allow you to perform operations on an image without modifying the original.

DUPLICATE AN IMAGE:

1. Select the image by clicking on the image's title bar.

2. Click on the duplicate button in the toolbox or select the **Duplicate** option from the **Image** menu. A duplicate image will appear.

3. If the original image is an .STB image (a non-modifiable file format), select Duplicate as Secure Image… from the Image menu to duplicate the image as a second secure image.

COPYING AN IMAGE TO THE CLIPBOARD

By placing images on the system clipboard, you are able to incorporate images into other images or transfer images to and from other applications.

PLACE AN IMAGE ON THE CLIPBOARD:

1. First, duplicate an image by clicking on the button or by selecting the **Duplicate** option from the **Image** menu.

2. Select a portion of the image by placing the mouse in selection cursor mode (by clicking on the button in the Toolbox) and then by clicking and dragging the mouse on a portion of the image. If you wish to redraw the selected area, select **Clear Image Selection…** from the **Image** menu and then redraw the selection.

3. Copy the section to the clipboard by pressing **Ctrl+C** on the keyboard or by selecting **Copy** from the **Edit** menu. If labels are present in the image you are copying and you want them to be replicated in the new image, choose **Copy with Labels**.

CREATING A NEW IMAGE FROM THE IMAGE ON THE CLIPBOARD:

1. To create a new image from an image you placed on the clipboard, select **New from Clipboard** from the **File** menu. The new image will appear on the **Prof.Suni** desktop.

2. If you copied labels from the original grayscale image, those labels will now be in grayscale rather than in color as they were in the original. Color labels **will** be in color if the original was a color image.

PLACING A CLIPBOARD IMAGE IN ANOTHER IMAGE:

1. Open two images to the **Prof.Suni** desktop.

2. Copy a portion of one of the images to the clipboard as directed in the section above "Copying an Image to the Clipboard." Paste the clipboard image onto the second image by pressing **Ctrl+V** on the keyboard or by selecting **Paste** from the **Edit** menu. The image section will be pasted on the second image (we'll now refer to the copied image section as a graphical marker).

3. Click on the **Pointer** button to place the mouse in picker cursor mode (so that we may move the graphical marker).

4. Click and hold the left mouse button on the image section.

5. Drag the graphical marker to a new location by moving the mouse.

6. Release the mouse button to place the marker at the new location.

> **Think of a label as a sticker that you can place on your image, move to a different position, change color, etc. without changing the image. Labels will continue to float above the image until you combine them with the image. When a label is combined with an image, it becomes a permanent part of the image.**

CROPPING AN IMAGE

Cropping operations are performed on a section of an image, and refers to the process of discarding the unwanted area in an image.

Cropping an image is accomplished by selecting the important portion of the image using the selection cursor mode.

TO CROP AN IMAGE:

1. Place the mouse in selection mode by clicking on the button in the toolbox or choose **Image Selection** from the **Actions** menu.

2. Select a portion of the image by clicking and dragging with the left mouse button. If you wish to redraw the Image Selection, select **Clear Image Selection…** from the **Image** menu and then redraw the selection.

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3. To crop the image, click on the button in the Toolbox or select
    To Selection Mask… from the **Crop** option in the **Image** menu.
    The image will be cropped to the selection mask.

EXTRACTING IMAGES

Extracting images refers to the creation of a new image from a section of
another (i.e. taking a periapical out of a full mouth series). **Prof.Suni**
offers two image extraction tools; **Auto Image Extraction** and **Selection
Extraction**. The **Auto Image Extraction** is a tool that comes in very
handy when dealing with mounted images (i.e. full mouth series). Using
this tool, images are extracted simply by clicking on them with the left
mouse button. This tool is not ideal in all circumstances for it will only
extract a single image. If you want to extract several images (or if Auto
Image Extraction has problems with an image), you should use the
Selection Extraction tool. Using this tool, you are able to extract a group
of images from an image.

USING THE AUTO IMAGE EXTRACTION:

1. Click on the Open button in the toolbar or select **Open …** from
    the **File** menu.

2. Double click on a patient folder.

3. Click once on the **Sample Full Mouth** file.

4. Click on the **Open** button to open the file.

5. Select **Auto Image Extraction** from the **Actions** menu.

6. Click on the periapical in the upper right hand corner. *The image
    will automatically be displayed in a new image window.*

7. Close the extracted image by clicking on the button located in
    the upper right hand corner of the image window.

USING THE SELECTION EXTRACTION TOOL:

1. Select **Selection Extraction** from the **Actions** menu.

2. Click and drag the mouse over the periapicals in the center of
    the full mouth series using your left mouse button. Release the
    mouse button. *A new image will appear containing the periapicals*

that you selected from the full mouth series. If you wish to redraw the selected area, select **Clear Image Selection…** from the **Image** menu and then redraw.

INVERTING

The inversion of an image has several primary functions. First and foremost, inversion is necessary when an image needs to be created from a negative (e.g. what is produced by a photo camera). The second, and not so well known, is the fact that switching between an image and its negative may make minute flaws in an image become more detectable.

INVERT AN IMAGE:

1. Open an image to the **Prof.Suni** desktop. Duplicate the image by clicking on the duplicate button in the Toolbox or by selecting the **Duplicate** option from the **Image** menu.

2. Click on the Invert button in the Toolbox or select **Invert** from the **Image** menu. The entire image is inverted.

3. Click on the Invert button again. The image is returned to normal.

SHARPENING

Prof.Suni provides you with a sharpening tool to allow you to compensate for out-of-focus or blurry images.

SHARPEN AN IMAGE:

1. Open a panoral image to the **Prof.Suni** desktop.

2. Click on the Sharpen button in the Toolbox or select **Sharpen …** from the **Enhancement** menu. The Sharpen Image dialogue window appears.

3. Move your cursor into the **Original** view. Your cursor will change into a hand.

4. Click and hold the left mouse button. Moving the mouse will now move the image in the original view.

5. Click on the Magnify button located below the **Original** view. When you move your cursor into the **Original** view, it changes into a magnifying glass.

6. Click with the *left* mouse button to *increase* the magnification. Click with the *right* mouse button to *decrease* the magnification.

7. Click on the Double Arrow button located below the **Original** view. The image will be resized so that the entire image appears in the window.

8. Click with the left mouse button twice on one of the lower molars on the left hand side of the x-ray.

9. Change the **sharpening factor** to **63** by either using the slider control, the up and down arrows, or by entering the value manually. Notice the change in the Preview window.

10. Click on the **5x5 Mask** button. You should see a noticeable difference based on the Mask size. The change in the Preview window will be implemented on the entire image.

11. Click **OK.**

12. Click on the undo and redo buttons in the Toolbox to change back and forth between the original and the sharpened versions of the image.

COLORIZING

Colorizing is the process of applying color to a grayscale image. Colorizing is used to increase the contrast between the various shades in an image. Its primary use is to enhance small details in an image.

COLORIZE AN IMAGE:

1. In order to see the effects of Colorization on an image, open the sample ceph image to the **Prof.Suni** desktop.

2. Duplicate the image by clicking on the duplicate button in the toolbar or by selecting the **Duplicate** option from the **Image** menu.

3. Click on **Colorize** from the **Image** menu. The image will be colorized. *Notice the definition increase in the facial tissue.*

4. Click on **Colorize** again or click the undo button. The image returns to normal.

You may click on the invert button (invert the image) while an image is colorized to get a different colorized image.

ROTATING

Images may need to be rotated for a variety of reasons (e.g. scanned in the wrong orientation).

ROTATE AN IMAGE:

1. Open an x-ray to the **Prof.Suni** desktop.

2. Duplicate the image by clicking on the Duplicate button in the Toolbox or by selecting the **Duplicate** option from the **Image** menu.

3. Click on one of the Rotate buttons in the Toolbox (or select **90° Clockwise**, **90° Counter-clockwise**, or **180°** from the **Rotate** option in the **Image** menu). The image will rotate accordingly.

Note: Do not close the image, it will be used in the next section.

TO ROTATE AN IMAGE AT A CUSTOM ANGLE:

1. Click on the Rotate button in the Toolbox or select **Custom …** from the **Rotate** option in the **Image** menu.

2. Enter a rotational value in the **Angle** box (e.g. **45** or **33.3**).

3. Click on the **OK** button. The image will rotate accordingly.

Note: Do not close the image, it will be used in the next section.

FLIPPING

Images may need to be flipped for a variety of reasons (e.g. scanned wrong side up).

FLIP AN IMAGE:

1. Click on the flip button in the Toolbox (or select **Vertically** or **Horizontally** from the **Flip** option in the **Image** menu). The image will flip in the appropriate direction.

2. If you have included labels in your image, you will be asked if you would also like to flip the labels. Choose Yes or No.

REDUCING AND RESIZING AN IMAGE

Resizing permits you to reduce the amount of memory and disk space required by an image. This feature is particularly useful when trying to reduce the transmission time of an image or reduce the amount of disk space required to store an image. **Prof.Suni** handles all of the details about maintaining accuracy of measurements in a resized image.

REDUCE THE SIZE OF AN IMAGE:

1. First, duplicate an image again by clicking on the duplicate button or by selecting the **Duplicate** option from the **Image** menu.

2. To reduce the image's file size, select **Reduce…** from the **Resize/Reduce** option in the **Image** menu.

3. Select the **50%** option.

4. Click on the **OK** button. The image file size will automatically be reduced by 50%; the image window will also be resized.

Labels

Labels may be used to draw attention to certain areas in an image or to incorporate information directly onto an image.

> **Think of a label as a sticker that you can place on your image, move to a different position, change color, etc. without changing the image. Labels will continue to float above the image until you combine them with the image. When a label is combined with an image, it becomes a permanent part of the image.**

PLACE LABELS IN AN IMAGE:

1. Duplicate one of the open images again by clicking on the duplicate button in the Toolbox or by selecting the **DUPLICATE** option from the **IMAGE** menu.

2. Place the mouse in arrow cursor mode by clicking on the arrow label button in the Toolbox or by selecting **ARROW** from the **LABELS** menu.

3. Click and drag with the left mouse button in the duplicate x-ray image window and then release the left mouse button. An arrow will appear. After the arrow is drawn on the image, you will be prompted to adjust the properties of the arrow, including the color, the size of the "Pen" (or lines around the arrow), the width of the arrow, and whether you wish to **FREEZE** the label.

> **Once you set a default label attribute, each new label of that type will automatically use that setting until you change the attributes.**

4. If you choose to **Freeze** a label, it can no longer be moved nor can it be deleted after the image is saved. The label can be deleted *before the image is saved* by clicking the Undo button until the label is removed.

5. Place the mouse in ellipse cursor mode by clicking on the ellipse button in the Toolbox or by selecting **Ellipse** from the **Labels** menu.

6. Click and drag with the left mouse button in the duplicate x-ray image window and then release the left mouse button. An ellipse will appear, along with the ellipse properties. Make the appropriate adjustments.

7. Place the mouse in time/date cursor mode by clicking on the button in the Toolbox or by selecting **Time and Dates** from the **Labels** menu.

8. Click in the duplicate x-ray image window where you want the current time and date to appear in the image. Choose the Time and Date format and click *OK*. The current time and date will appear.

9. Place the mouse in text cursor mode by clicking on the text button in the Toolbox or by selecting **Text …** from the **Labels** menu.

10. Click and hold in the duplicate x-ray image window where you want to place text and drag the mouse to make the appropriately sized text box. The Text Properties dialogue will appear.

11. Enter text that you would like to appear in the image (e.g. "This is sample text"). Make desired changes to the font, font size and color, text justification and background color.

12. Click on the **OK** button. The text will appear in the image.

13. Place the mouse in cursor mode by clicking on the pointer button in the Toolbox.

14. Click with the *left* mouse button on the text you just added to the image (this selects the text box). A selected label will be indicated by small rectangular highlights appearing at the four corners of the label.

15. Click with the *right* mouse button on the text you just added to the image. The Text dialogue will appear again. *This is how you modify the text in a text box*.

16. Modify the text, background and other attributes.

17. Click on the **OK** button.

18. Click on one of the other labels in the image with the left mouse button. The label will be highlighted.

19. Press the **<Delete>** key on the keyboard. The label will disappear. *Pressing the **<Delete>** key on the keyboard deletes unmerged markers.*

TAKING MEASUREMENTS

MEASURE AN IMAGE:

1. Open an image to the **Prof.Suni** desktop.

2. Click on the measurements button in the Toolbox.

3. Click *and hold* the left mouse button while simultaneously clicking on several points along the apex of a tooth with the right mouse button. *If you need to delete a point you selected, press either the **<Delete>** or **<Backspace>** keys on the keyboard.*

4. Once you have clicked on all points along the desired apex, release both the left and right mouse buttons. The Measurement Properties dialogue will appear.

5. The appearance of the measurement can be changed within this dialogue, including font size, style and color of the main measurement and the intermittent measurements, the measurement format (centimeters, millimeters, inches), and the size and color of the line connecting the measurement points.

6. Click on the **OK** button.

7. *Notice the reported measurement. Due to the manner in which the x-ray image is acquired, the actual length of the tooth's apex will not correspond with the displayed image. The image is not 1-to-1.* This is why you should calibrate measurements in an x-ray (if possible) before taking measurements.

8. Click on **Calibrate Measurements** in the **Actions** menu. *This tool is used to calibrate measurements.*

9. Follow the same procedure as you did before when you placed the points along the apex of the tooth, i.e., click and hold with the left mouse button while simultaneously clicking on at least two points with your right mouse button across an area of known length. (The area against which you are calibrating measurements *does not* have to be the same area in which you took the measurement to begin with. For example, you can

calibrate all measurements for this image by clicking across a tooth that you know is 14mm across. **Prof.Suni** will globally calibrate all measurements within an image.)

10. Release both the left and right mouse buttons. The Calibrate Measurements dialogue will appear.

11. Enter the Actual distance. *You can specify the measurement in either inches or millimeters using this dialogue.*

12. Click on the **OK** button. Note that the reported measurement will change to reflect the newly calibrated distance of the apex you measured earlier. All other reported measurements that you may take on this calibrated image will now correspond to actual distances.

You should calibrate measurements in images whenever possible. Measurements are not guaranteed to be accurate.

MERGE A SPECIFIC LABEL INTO THE IMAGE:

1. Remember that labels are simply placed on the image until they are merged into the image.

2. Place the mouse in picker cursor mode by clicking on the pointer button.

3. Select the desired label by clicking on it with the left mouse button. Selected labels are indicated by rectangular highlights appearing at each corner of the label.

4. Merge the label into the image by clicking on the merge label button in the Toolbox. The label will be merged into the image.

MERGE ALL OF THE LABELS INTO THE IMAGE AT THE SAME TIME:

Click on the merge all icons button in the Toolbox. The Merge All Labels icon is accessed by clicking on the black triangle in the bottom right corner of the Merge Label icon. All of the labels will be merged into the image.

Think of a label as a sticker that you can place on your image, move to a different position, change color, etc. without changing the image. Labels will continue to float above the image until you merge them with the image. When a label is merged with an image, it becomes a permanent part of the image.

IMAGE INFORMATION

Image Information refers to the general details associated with an image and its image file (what is stored on your hard drive). Image information is displayed by clicking on the Info button in the Toolbox, by selecting IMAGE INFORMATION from the IMAGE menu, or by right-clicking on the image and selecting IMAGE INFORMATION… from the IMAGE RELATED INFORMATION menu. The patient name and ID number, tooth associations, the type of image, whether the image has been modified and the type of labels on the image (if any) is included in Image Information.

Extended Image Information is accessed by pressing the Extended Info button in the Image Information interface, or directly by selecting the Extended Info button in the Toolbox or by right-clicking on the image and selecting EXTENDED IMAGE INFORMATION… from the IMAGE RELATED INFORMATION menu. Extended Image Information details the Image Type and Image Subtype.

ADDING NOTES

Notes are added to an image through the Image Notes dialogue, which is accessible through four methods.

1. Right click on the image, then select NOTES… from IMAGE RELATED INFORMATION.

2. Select **Notes** by clicking on the word "Notes" in the Status Bar at the bottom of the **Prof.Suni** application.

3. Click on the Notes button in the Toolbox.

4. Select NOTES… from the IMAGE menu.

Type in the appropriate text to add Notes to the image. A Dated Entry button enables the placement of the day and date into your notes; a Separator button places a separation line between sections of your notes or between the day and date and your notes.

CREATING MS WORD DOCUMENTS

Prof.Suni automatically generates documents within Microsoft Word that contain the current image as well as the current patient's information, such as his or her name as SS or ID number.

To open a Word document containing the current image, select one of the four included documents by clicking on DOCUMENTS… in the TOOLS menu.

If you wish to add templates to the document list in **Prof.Suni**, develop the document in Word and place a copy of the template in the Documents folder in the **Prof.Suni** directory. The new document template(s) will appear in the document list the next time you start **Prof.Suni**.