

# Using the Web1000

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Haifa, Israel



## UCSD

#### VA fully PACS

UCSD/Thornton in first phase of conversion from film to fully digital system

#### Agfa PAC system

- IMPAX diagnostic display stations
  - Web1000 webserver



#### Web1000

 Allows you to view digital imaging from any computer that has internet access







## Starting up

- You need a PC with at least 64 megabytes RAM (124 or higher recommended)
- You need internet access via cable, ISDN, DSL, ethernet network, or T1 line
- Minimum 1024x768 resolution
- Minimum 16 bit color



## Starting up UCSD

- You need a 6 digit provider number for UCSD and a password
- If you already have a password for the UCSD IMPAX workstations, the same password will work for the webserver
- Contact person Ms.
   Kim van Leeuwen at 619-543-6760

#### Option 1

 Use internet from <u>any</u> computer without installing any new software

Option 2

 Install ZAC software on your computer (faster startup and load times)

#### Direct web log-on UCSD

#### • Web address is http://pacs.ucsd.edu



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#### Scary messages

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JavaScript o requesting a	r a Java applet from dditional privileges.	Mitra Imaging In	corporated ' is
Granting the following i Reading, modification,	s high risk: or deletion of any of	your files	4
Remember this decis	ion		Details
Certificate	Grant	I Content/Software Pub Deny	Help

- You will get a series of scary messages the first time
- You have to hit the "grant" button or it will not work
- Use the "remember" button so you don't get them again

#### UCSD web1000 login screen



#### UCSD Option 2: Zac software

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• 11.1°	V T	Bookmarks	🦧 Go to: 🛛	nttp://132	2.239.48.200	)/zac.html		
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- Type http://132.239.48.200/zac.html in address bar of your internet browser
- Download ZAC installation program by scrolling down to the line "Zac executable..." and clicking it

#### ZAC Download - Netscape



#### Installing ZAC

Install the Zero Admainstration Chent (ZAC) package to store the Web1000 applet files locally on your hard drive. This reduces any delay at the startup of Web1000 you may otherwise experience with a slow modem connection

- Click on the link below to download the bootstrap application for WebServer\_wm32\_x86w exe to your local hard drive.
- 2 Double-click on the WebServer\_wm32\_x86 exe application. The "Enter HTTP Proxy Host and Port dialog opens."
- 3 If a proxy server is present, enter the hostname and port in the dialog and check on "Use these settings". If no proxy server is present, leave the fields blank and check on "No proxy".
- Specify an installation directory for installing the client applet files. The default location is Crizzer. You may specify another location if you wish.

The applet files are downloaded from the server to your local hard drive. A progress dialog indicates how long this takes. Depending on the network connection to the web server, this may take a few minutes. When all files have been downloaded, the login window opens and you can connect to the web server as normal.

#### Zac software

- Save zac installer program to desktop (preferred) or to a temp file
- Close all open programs, including internet
- Double click on the zac icon to install (should be on your desktop)
- Program will self-install, default install is to C:\zac
- Upon successful install, a new icon appears on your desktop called "webserver"
- Rename if you want, delete the install program from your desktop





#### ZAC login screen

👹 WebServer	Construction //	A CONTRACTOR OF THE OWNER OF THE	
Options			
	User ID:	004445	
	Password:	*****	
Proxy Settings	Test Pattern	Login	Password
Connecting to server			

- Enter your 6 digit user ID and password
- If ID area is not accepting, enter password first and come back to user ID
- Hit login button

## Starting up VA

- You need a VA provider number and password
- This provider number is <u>different</u> than the one you use for UCSD
- If you have a password for the VA IMPAX workstations, the same password will work for their webserver
- Contact person is Mr. Mike Olds VA x7576

- Only 1 option
  - Install VISTA software and VPN client on your computer
- No direct web logon across VA firewall

#### Installing VA software

- Install software on the CD given to you by Mike Olds
- Will install VPN software automatically to c:/program files
- You will have 2 new directories called VPN and VISTA
- You will have an icon to start VA VPN on your desktop



#### VA VPN client

- Start up VPN client
- You will be prompted for username and password
- VPN client must be connected in order to continue
- VPN screen will disappear but there will be an icon in your system tray indicating you are connected



#### Web log-on VA

- <u>Once VPN client is connected</u> you can use your web browser (Netscape or Explorer) to access the VA images
- Web address is http://vahsdcweb1000



#### Same scary messages

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Granting the Reading, mo	following is <b>high risk</b> : odification, or deletion of any of your files	
Remembe	er this decision	Details

- You will get a series of scary messages the first time
- You have to hit the "grant" button or it will not work
- Use the "remember" button so you don't get them again

#### VA web1000 login screen



#### **Other buttons**

- "Proxy settings" allows you to specify additional proxy servers
- "Test pattern" allows you to test your monitor calibration (display properties/ settings/ advanced)
  - "Password" allows you to change password

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	User ID:		
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#### Successful log in

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### First things first

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- The left button specifies patient location
- Default is web cache, this is not a good choice

### First things first

- Click on location button
- Make sure you have "All locations" selected
- "Web cache" only holds cases for 60 days
- Occasionally, new cases are not in the cache
- You can modify the default in preferences so "All locations" is default



### First things first

- Make sure the "enable lossy compression" button is highlighted
- This makes image loading and viewing much faster
- It should be highlighted by default, can modify in prefernces



#### Decide what you want to see



- Specific patient, specific modality, specific date?
- Narrow search by using either the quick access buttons or the search criteria boxes

#### Quick access buttons

Location Web cache	Patient Name	Sear			
Patient Name	Patient ID Iue It ID:	× F	atient Name	Patient ID	
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	OK Cancel		Specify value nter patient nam Dirt, Joe	10:	
		14		ОК	Cancel

These buttons are on the UCSD system but not on the VA system. They will pull all the digital studies for that patient.

#### Using search criterion boxes

- Use these to look for specific range of exams
- Must use these if you can not remember the patient's name or ID number



#### Search criteria

 You can search in a variety of other ways





#### You know patient's info

- You can enter name or id number
- Parts of the name and initials do not work!!
- Last name alone is fine
- No advantage over quick access buttons





#### Specific date or modality

#### Useful for restricting your search

Modality	*	Date	
MR	•	Any date	-
СТ	*	I any date	
DF		Any date	Y.
DG		Today P	7
DGNM		Yesterday	•
DGUS		Last 2 days	
MR		Lastweek	8
NM		Last month	i i
ОТ I	-	Lastmonur	1

## All your patients

- Pull your name from the referring physician list
- Restrict the date if
  you use this
  option or all your
  patients, ever, will
  show up on the
  list!



#### Criteria that do not work

 Would be useful, but it does not work properly

Body part	•
ABDOMEN	•
ABDOMEN	
CHEST	
DEFAULT	
EXTREMETIES	
HEAD	
HIPS	
JOINTS	
KNEE	-

Useless criteria





Patient Location	<b>_</b>
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#### How to start search



 Once you have selected criteria, click the search button



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Accession Number	Patient Name	Patient ID	Study Date	Study Time
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The more you restrict your search, the faster this will be!!

#### Example

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- 👩 1592774	BROWN, LOIS HESTER	0601333	16-Jan-2002	11:13:27 PM	CT HEAD W/O CNT	CT	RT ARM WEAKNESS,	23	
- 👩 1592155	CALHOUN, STANLEY T	0510624	16-Jan-2002	10:52:01 AM	CT ABD RENAL ST	CT	R FLANK PAIN R GRC	80	226
- 🗑 1588206	CANAS, RAMIRO	1804404	16-Jan-2002	4:55:11 PM	CT THORAX W/O	CT	HEMOPTYSIS	133	
- 🗑 1592964	CANEDO, NELLY CARMEN	1027592	17-Jan-2002	9:53:29 AM	CT RENAL-REDUCE	СТ	59 YO FEMALE WITH	76	
- 🗑 1592773	CAPP, DARLENE	1838540	16-Jan-2002	10:57:15 PM	CT LMTD APPENDX	CT	ABD PAIN, HERNIA, NO	89	
- 🗑 1592894	CHIANG, KENNETH F	1818722	17-Jan-2002	9:31:05 AM	CT HEAD W/O CNT	CT	HEADACHE-NOS	23	
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# Dr. Meyers searches for a recent pelvic CT, too tired to remember patient's name

#### Example

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 Dr. Brage looks for a recent foot CT, but finds out that the "body part" button does not work perfectly

#### Example

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Accession Number	Patient Name	Patient ID	Study Date	Study Time	Study Description	Modality	Reason For Study	Images
Accession Number	Patient Name RUSSELL, ELLEN SUMMER	Patient ID 1891696	Study Date	Study Time 9:19:25 AM	Study Description T-SPINE MRI	Modality MR	Reason For Study DISCITIS	Images 98
Accession Number	Patient Name RUSSELL, ELLEN SUMMEF RUSSELL, GIRLA	Patient ID 1891696 1955367	Study Date 11-Jan-2002 04-Jan-2002	<b>Study Time</b> 9:19:25 AM 2:19:26 PM	Study Description           T-SPINE MRI           ECHO ENCEPH	Modality MR US	Reason For Study DISCITIS PREMATURITY	<b>Images</b> 98 32
Accession Number -  1585853 -  1583481 -  RUSSELL, GIR	Patient Name RUSSELL, ELLEN SUMMEF RUSSELL, GIRLA I 1955368	Patient ID 1891696 1955367	Study Date 11-Jan-2002 04-Jan-2002	Study Time           9:19:25 AM           2:19:26 PM	Study Description T-SPINE MRI ECHO ENCEPH	Modality MR US	Reason For Study DISCITIS PREMATURITY	Images 98 32
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Accession Number	Patient Name RUSSELL, ELLEN SUMMEF RUSSELL, GIRLA 1 1955368 2 0891257 I 1951175 RUSSELL, MARYANNE D I 1158938 RUSSELL, ROSALYN VANE	Patient ID 1891696 1955367 1937140 1737709	Study Date 11-Jan-2002 04-Jan-2002 02-Jan-2002 18-Dec-2001	Study Time           9:19:25 AM           2:19:26 PM           7:11:43 PM           12:09:55 PM	Study Description T-SPINE MRI ECHO ENCEPH BRAIN MRI OB ECHO MULTI	Modality MR US MR US	Reason For Study DISCITIS PREMATURITY TINGLING, TWITCHIN G3P1 TWINS GEST. (	Images 98 32 236 51
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Dr. Pedowitz remembers the patient's name but can not remember what he ordered
#### Example

- Dr. Garfin searches for his patients that had studies done today (and finds exactly what he wanted)
- That is why he is the chairman



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	VVALLACE, MARJEAN ELIZA (1873795	1209762	17-Jan-2002	8:17:18 AM	L SPINE W/S,C,I	MR	S/P FUSION,LEG PAIL	129

#### Select patient from list

Study	) Th	umbnail		Image	R	eport	Conf	erence	
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Patient Name	Patient ID Patient Name DUNGCA, ROSALIA J HOLLAND, DIANE T	Patient ID 1642964 1253503	Study Date 17-Jan-2002 17-Jan-2002	Study Time 11:51:51 AM 9:36:43 AM	Study Description	Modality MR	Reason For Study HEPATOCELLULAR L	Images 101	Pa
Patient Name	Patient ID Patient Name DUNGCA, ROSALIA J HOLLAND, DIANE T KLAT, CASIMIR	Patient ID 1642964 1253503 1763516	Study Date 17-Jan-2002 17-Jan-2002 17-Jan-2002	Study Time 11:51:51 AM 9:36:43 AM 10:22:46 AM	Study Description ABDOMEN MRI PELVIS MRI ABDOMEN MRI	Modality MR MR MR	Reason For Study HEPATOCELLULAR I PINTO/MATTREY PRC EVAL HCC	Images 101 111 550	<b>Pa</b>
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Patient Name cession Number 1583189 1592918 1578403 1591522 1590568	Patient ID Patient Name DUNGCA, ROSALIA J HOLLAND, DIANE T KLAT, CASIMIR MILLER, NADINE SHARON SANDERS, PATRICIA A	Patient ID 1642964 1253503 1763516 1310424 0874449	Study Date 17-Jan-2002 17-Jan-2002 17-Jan-2002 17-Jan-2002 17-Jan-2002 17-Jan-2002	Study Time 11:51:51 AM 9:36:43 AM 10:22:46 AM 6:50:05 AM 7:41:33 AM	Study Description ABDOMEN MRI PELVIS MRI ABDOMEN MRI ANKLE MRI L-SPINE MRI	Modality MR MR MR MR MR MR	Reason For Study HEPATOCELLULAR L PINTO/MATTREY PRC EVAL HCC OSTEOMYELITIS SEVERE LBP	Images 101 111 550 222 79	<b>Pa</b>
Patient Name  cession Number  1583189  1592918  1578403  1591522  1590568  1590262	Patient ID Patient Name DUNGCA, ROSALIA J HOLLAND, DIANE T KLAT, CASIMIR MILLER, NADINE SHARON SANDERS, PATRICIA A SMITH, WILLIAM T	Patient ID 1642964 1253503 1763516 1310424 0874449 1957471	Study Date 17-Jan-2002 17-Jan-2002 17-Jan-2002 17-Jan-2002 17-Jan-2002 17-Jan-2002 17-Jan-2002 17-Jan-2002	<b>Study Time</b> 11:51:51 AM 9:36:43 AM 10:22:46 AM 6:50:05 AM 7:41:33 AM 11:11:14 AM	Study Description ABDOMEN MRI PELVIS MRI ABDOMEN MRI ANKLE MRI L-SPINE MRI BRAIN MRI	Modality MR MR MR MR MR MR MR	Reason For Study HEPATOCELLULAR L PINTO/MATTREY PRC EVAL HCC OSTEOMYELITIS SEVERE LBP COLLOIS CYST	Images 101 111 550 222 79 310	<b>Pa</b> 22 83
Patient Name Ccession Number  1583189  1592918  1578403  1591522  1590568  1590568  1592062  STEWART, TAM	Patient ID Patient Name DUNGCA, ROSALIA J HOLLAND, DIANE T KLAT, CASIMIR MILLER, NADINE SHARON SANDERS, PATRICIA A SMITH, WILLIAM T I 1697394	Patient ID 1642964 1253503 1763516 1310424 0874449 1957471	Study Date           17-Jan-2002           17-Jan-2002           17-Jan-2002           17-Jan-2002           17-Jan-2002           17-Jan-2002           17-Jan-2002           17-Jan-2002           17-Jan-2002	Study Time           11:51:51 AM           9:36:43 AM           10:22:46 AM           6:50:05 AM           7:41:33 AM           11:11:14 AM	Study Description ABDOMEN MRI PELVIS MRI ABDOMEN MRI ANKLE MRI L-SPINE MRI BRAIN MRI	Modality MR MR MR MR MR MR MR MR	Reason For Study HEPATOCELLULAR L PINTO/MATTREY PRC EVAL HCC OSTEOMYELITIS SEVERE LBP COLLOIS CYST	Images 101 550 222 79 310	<b>Pz</b> 22 83

- Single click name of the patient to highlight it
- Then click thumbnail, image, or report buttons on top

#### Select patient from list

- Right click name to access choices
- Double-click name to go straight to images

Study Time	Study	Description	Modality	F
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#### **Older studies**

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o Would	i you like to	) retrieve t	the studies?	
) This n	nay take a	few minu	tes.	
4 You w	ill be notifi	ed when t	the images are av	vailable for viewing.
Á				
4			Yes	No
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- Studies >60 days old go to a separate cache
- Inexplicably, a few new studies also go to this cache
- Select yes and wait for study to appear, may take a few minutes

## Folders

Accession Number	Patient Name	Patient ID	Study Date	Study Time	Study Description
T 1094303	OULDBERG, JACK	1900002	10-Jan-2002	4.01.09 FW	CT RENAL-REDUCE
- 🗑 1593727	INNIS JR, DONALD ALWYN	1774076	18-Jan-2002	1:06:02 AM	CT HD W/O CON
- 🗑 1594290	JODOIN, KELLI ELIZABETH	1375033	18-Jan-2002	4:43:46 PM	CT HEAD W/O CNT
- 🗑 1594046	KILEY, RICHARD FRANCIS	0479750	18-Jan-2002	12:13:39 PM	CT HD W/O CON
- 🗑 1589034	KRISTOFETZ, WILLIAM STE	1570303	18-Jan-2002	2:35:18 PM	CT ABD RENAL ST
- 🗑 1593925	LOPEZ, GIRL	1958213	18-Jan-2002	2:52:34 PM	CT HD W/O CON
- 🗑 1593735	MAGALLANES, GUADALUP	0560370	18-Jan-2002	1:59:24 AM	CT ABD REDUCED
- 🗑 1587921	MAMEDE, ROBERT S	1200307	18-Jan-2002	10:12:28 AM	CT HEAD W/CNTRS
🖶 🧰 MCINTYRE, JO	)F 1951423 N				
- 0 1593486	MERLANT, GERALD N	1956825	18-Jan-2002	6:36:01 PM	CT THRX W/CONT
- 🗑 1587496	MUN, JENNY JUNGIN	1916876	18-Jan-2002	4:08:20 PM	CT RENAL-REDUCE
- 🗑 1577538	PIERCE, DON WILLIAM	1954349	18-Jan-2002	10:04:47 AM	CT MAXILLOFA WO

- Some patients with multiple exams done at the same time will be listed as a folder
- Hit the + to the left of the folder to view study details
- Do not double click the name or it will try to load everything, which takes forever...

# **Open folder**

Accession Number	accession Number Patient Name		Study Date	Study Time	Study Description	Mod
TIM 1084000	OULDBERG, JACK	1900302	10-Jan-2002	4.01.08 - 10	CT RENAL-REDUCE	<u>CI</u>
- 🗑 1593727	INNIS JR, DONALD ALWYN	1774076	18-Jan-2002	1:06:02 AM	CT HD W/O CON	CT
-🗑 1594290	JODOIN, KELLI ELIZABETH	1375033	18-Jan-2002	4:43:46 PM	CT HEAD W/O CNT	CT
- 🗑 1594046	KILEY, RICHARD FRANCIS	0479750	18-Jan-2002	12:13:39 PM	CT HD W/O CON	CT
- 🗑 1589034	KRISTOFETZ, WILLIAM STE	1570303	18-Jan-2002	2:35:18 PM	CT ABD RENAL ST	CT
-🗑 1593925	LOPEZ, GIRL	1958213	18-Jan-2002	2:52:34 PM	CT HD W/O CON	СТ
- 🗑 1593735	MAGALLANES, GUADALUP	0560370	18-Jan-2002	1:59:24 AM	CT ABD REDUCED	CT
- 🗊 1587921	MAMEDE, ROBERT S	1200307	18-Jan-2002	10:12:28 AM	CT HEAD W/CNTRS	CT
🛱 🔄 MCINTYRE, JO	F 1951423					
小面 1594066	MCINTYRE, JOHN	1951423	18-Jan-2002	12:48:57 PM	CT ORB/SLAW/O	CT
L 1594065	MCINTYRE, JOHN	1951423	18-Jan-2002	12:48:57 PM	CT HD W/O CON	CT
- 🗑 1593486	MERLANT, GERALD N	1956825	18-Jan-2002	6:36:01 PM	CT THRX W/CONT	СТ
- 0 1587496	MUN, JENNY JUNGIN	1916876	18-Jan-2002	4:08:20 PM	CT RENAL-REDUCE	CT
- 🗑 1577538	PIERCE, DON WILLIAM	1954349	18-Jan-2002	10:04:47 AM	CT MAXILLOFA WO	СТ

 After you hit the + sign, the study details become visible immediately

## Image mode



#### **Select series**



# Blue box

- Blue box is the series you have selected for viewing
- Name of series listed above on MR exams
- Can select one or all series
- Hit OK button to view series you have selected



#### View series

- Sometimes the OK button does not appear
- Just select your series and hit this button again and the series you want will show up



# Moving through the images



#### Use sliding number bar to look at images

#### Cine



#### Cine mode

Cine mode loads all the images into your local memory Once loaded (takes a minute or two), viewing images in the regular image mode is much faster



# Image formats



#### Using preset windows



#### Rewindowing the image

- Hold left mouse button down and scroll across and up and down the image
- If that does not work, right click and make sure you have windowing selected on the floating toolbar



# Rewindowing all the images

- Highlight the link button
- That way any rewindowing you do is applied to all the images in that series
- This button is not a default, need to add it to your toolbar by going to preferences button



# Scout (CT only) and attributes



#### Split screen



#### Split screen



#### Split screen





#### **IDXRAD** integrations

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The reports from IDXRAD for nondigital modalities are being integrated with the Web1000. Description of study and reason for study are not yet integrated.

#### **Advanced features**

- Not for computer geeks only!
- Saving images
- Preferences
- Conferencing



# Saving images



# Saving images

Save Images					<u>?</u> ×	67
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	Save as type:	All Files (*.*)				

- You can save images to hard drive or to floppy
- Default save type is jpg, default name is MRN
- Average file size is 100 kbytes per image

#### Annotation

- Right click away from the area you want to measure or annotate
- You can measure distances and angles



#### Preferences

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- Set up the Web1000 for the way <u>you</u> use it
- Changes you make will be saved in your profile only!



#### **Preferences Study**

Study	Wizards	Machine Profile	Toolbar layout Ima	ge
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#### **Preferences: Wizards**

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				Save	
				Delete	

- Manage your wizards in the preferences options
- A startup wizard determines what happens when you first start up the webserver
- Default wizards are Patient name and Patient ID
- Change them to "all locations" and save that change

#### Wizards

- Once you have a set of criteria you like, make it a wizard
- You can have multiple wizards



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#### **Preferences: Machine profile**

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# **Optimizing performance**

#### Current Profile:



For smoother and faster performance, assign system memory as high as you can.

Find out your system memory at Start/Settings/Control panel/System. Recommend you assign 50-65% of your total RAM.





## Save levels, linking etc.

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#### Preferences: Image

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## Conferencing



- Both people need to be logged on to the webserver simultaneously
- View will be identical for both



### Conferencing









# Conferencing

- All logged on users are listed
- Select the person you want to invite and add them to the invited user list
- Hit start



#### http://pacs.ucsd.edu/help



#### Web1000

- The Web1000 lets you to look at studies from any computer with web access
- It is easy to use, anyone can learn!
- Have fun!





# Using the Web1000