



**User Manual for Online
National Registry of Animal Pathology**

**Version 1.0
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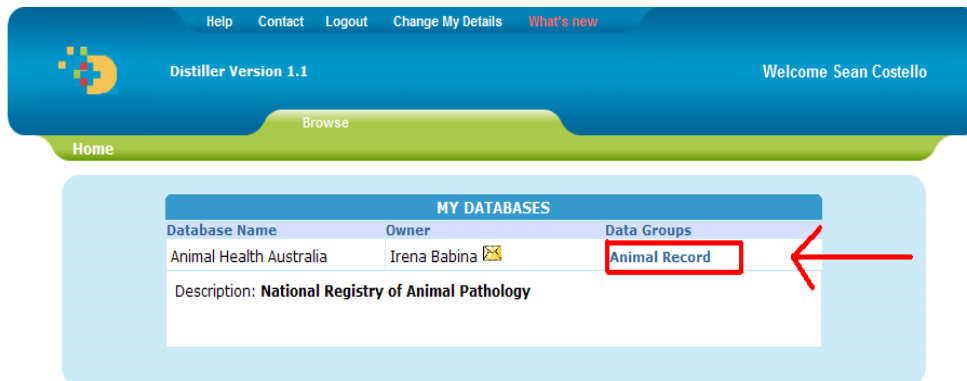
1. Logging in and accessing the database

To login to the database, go to <http://animalhealth1.telligence.net.au/distiller/login.php> . Enter your username and password in the fields provided and click the SUBMIT button.



The image shows two side-by-side panels. The left panel is the login page for 'Distiller'. It features the Distiller logo (a stylized 'D' with a cross) and the text 'Unlocking The Power of Life Science Datasets The Ultimate in Image-Omic Solutions'. Below this is a 'Login' section with fields for 'Username:' and 'Password:', a 'Submit' button, and a note that 'username and password are case specific'. At the bottom, it says 'For help please contact info@slidepath.com'. The right panel is a promotional banner for 'www.slidepath.com'. It describes Distiller as a 'fully configurable and customisable web-enabled image informatics management engine for ad-hoc query/hypothesis testing and data clustering of life science datasets'. It lists applications: 'Bio/tissue bank management solutions involving: High-throughput cell and tissue screening. Biomarker/drug target identification and validation studies. Tissue Micro Array Image and data management.'

Once you have logged in your default view is 'My Databases'. Here you can see the databases you have access to. You can enter the database of interest by clicking on the field under Data Groups.



The image shows the 'My Databases' interface in the Distiller application. At the top, there is a navigation bar with links for 'Help', 'Contact', 'Logout', 'Change My Details', and 'What's new'. Below this, the version 'Distiller Version 1.1' and a welcome message 'Welcome Sean Costello' are displayed. A 'Browse' button is visible. The main content area shows a table titled 'MY DATABASES' with the following data:

Database Name	Owner	Data Groups
Animal Health Australia	Irena Babina 	Animal Record

Below the table, the description for the selected database is shown: 'Description: National Registry of Animal Pathology'. A red box highlights the 'Animal Record' link in the 'Data Groups' column, with a red arrow pointing to it from the right.

2. Browsing Cases

2.1.1 Home - Top Level Data Group View

When you click onto your database the top level group is shown. 10 cases are shown at a time as a default but this can be increased by selecting the 'Records per page' tool and choosing the number of cases you want to see from the drop down menu.

You can navigate through the records using the 'next' and 'back' buttons and also by using << (go to start) and >> (skip to end) buttons.

Change View

Select a case to view additional information

Change the number or records displayed

Case reference	Age	Species	Breed	Sex
NRDAP D0081	4 yo	Goat		F
AAHL 090		Goat		
NRDAP D0122	Adult	Goat		
NRDAP D0010	Foetus	Goat		
NRDAP D0129	Foetus	Goat		
NRDAP D0030		Goat		
NRDAP D0054	5 mo	Goat	Angora	M
NRDAP D0090	Kid	Goat		
NRDAP D0077	Adult	Goat	Saanen	M
NRDAP D0136	Adult	Goat	Cashmere	F

You can change the default view by selecting the 'Change View' button. This displays the information that can be changed. Each attribute can be selected or unselected depending on what view you require.

Attributes can be checked if they are required to be visible

Information Available	Show as Column
Case reference	<input checked="" type="checkbox"/>
Age	<input checked="" type="checkbox"/>
Species	<input checked="" type="checkbox"/>
Breed	<input checked="" type="checkbox"/>
Sex	<input checked="" type="checkbox"/>

Select the 'Submit' button and you are returned back to the home view, but with it changed to suit your requirements.

To view further information (sub-group data) about the case click the folder icon associated with that case.


2.1.2 Sub-group data

When a case folder icon is clicked the top level group information and the sub-level group information is displayed for that case.

The screenshot shows the top navigation bar with 'Help', 'Contact', and 'Logout' links. The user is logged in as 'Sean Costello'. The breadcrumb trail is 'Home » Animal Health Australia'. The main content area displays the 'Animal Record' sub-group with a 'Delete' and 'Edit' button. The data is as follows:

Animal Record		Delete	Edit
Case reference	10407		
Age			
Species	Pig (0)		
Breed			
Sex			


Below this is the 'Digital Slides' sub-group with an 'Add Digital Slide' button. A '+' icon is visible on the left side of the table, indicating it can be expanded. The data is as follows:

Digital Slides		Add Digital Slide
Thumbnail		
Title		
Date	2007-11-23	
Description		
Aetiology	Haemophilus parasuis	
Diagnosis	Epicarditis	
Comments		

In this example the top level information is 'Animal Record' and the sub level data is 'Digital Slides'.

To view the sub level group data press the '+' button. This displays all that sub level group information.

The screenshot shows the same interface but with the breadcrumb trail updated to 'Home » Animal Health Australia » Animal Record'. The 'Digital Slides' sub-group is now expanded, showing a 'Delete' and 'Edit' button. The data is as follows:

Digital Slides		Delete	Edit
Slide ID			
Title			
Date	2007-11-23		
Description			
Aetiology	Haemophilus parasuis (0)		
Diagnosis	Epicarditis (48)		
Comments			



3. Viewing a Slide

3.1.1 Examining a Slide

The slide can be viewed by clicking on the thumbnail of the slide. This brings you to the slide viewer which allows you to examine and annotate the digital slide.

viewer

A number of tools are available to aid your examination of slides:

- Changing magnification
- Lateral scrolling
- Adjusting image quality
- Through-focusing of multi-focal plane slides



You can scroll through the entire slide by clicking and dragging on the image in the main viewer window. Alternatively, the following controls are available to assist in your examination of the digital slide:

- The NAVIGATION CONTROLS allow a user to scroll laterally in the digital slide. The four arrow icons scroll the slide in the X and Y directions. The central button returns the user to a low power overview image.

- The SLIDE OVERVIEW can also be used to navigate the slide. Users click on a particular region of interest within the overview, and they will be directed to that region in the main viewer. The green box at the centre of the red cross-hair indicates the current field of view.
- The MAGNIFICATION CONTROLS allow users to zoom in and out of the digital slide.

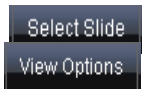


- The (+) and (-) icons at either end of the toolbar increase and decrease magnification respectively. The four arrows allow the user to rapidly switch between 4x (left-most arrow), 10x, 20x and 40x (right-most arrow) magnifications, similar to switching objectives on a microscope. At higher magnifications, you will see an additional arrow for 60x at the extreme right. Note, you can also right-click on the viewer window to change magnifications.

- Click on the BACK ARROW to return to the FOLDER CONTENTS page



- Click the SELECT SLIDE button to switch between slides in the current folder.



Advanced Options:

- Click the VIEW OPTIONS button to access advanced viewer tools.

The options menu lists all the additional tools available within the viewer. Note, a blue border and tick mean the option is currently displayed within the viewer. You can toggle display status by clicking on the circle icon.

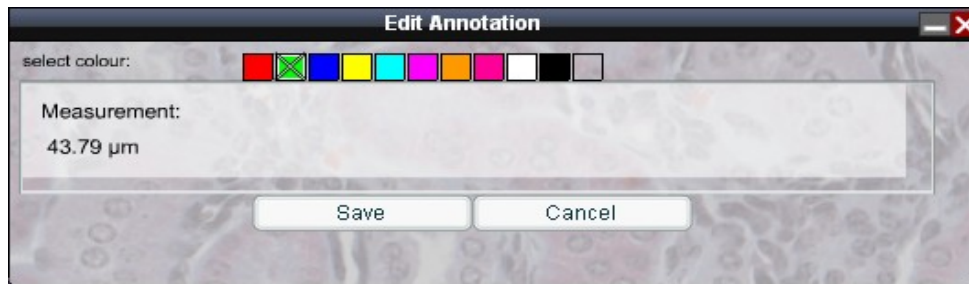
<input checked="" type="checkbox"/>	Annotations	Toggles the display of annotations on the slide
<input checked="" type="checkbox"/>	Annotation List	Displays a list of annotations on the slide
<input checked="" type="checkbox"/>	Slide overview	Toggles display of slide overview window
<input type="checkbox"/>	Slide Joystick	Toggles the slide joystick control
<input checked="" type="checkbox"/>	Navigation Controls	Switches navigation controls to "auto-hide"

3.1.2 Measurement Tool

You can use Digital Slidebox's built in calliper tool to perform measurements on screen. Click the measurement button.



You will notice the hand icon change to a cross-hair. Draw your measurement and Digital Slidebox will return a value for that measurement.



You can choose to save your measurement on the slide (temporarily) if you wish. Note that when you mouse back over a measurement, the value will be displayed.

Note: The measurement tool scales automatically from micrometers, to millimeters, to centimeters as you draw the marker.

3.1.3 Snapshots

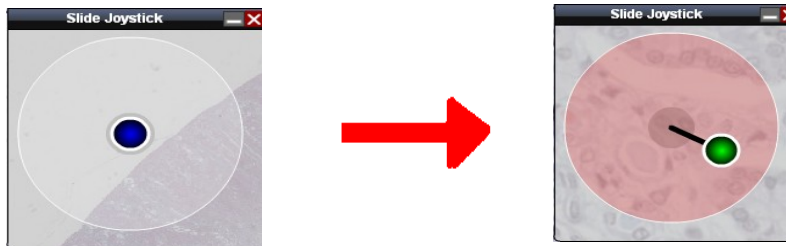
Use the SNAPSHOT button to capture a still image of the current field of view, and export it as a JPEG.



When you take a snapshot, it opens in a new window. Right click on the image and choose “SAVE AS” or “SAVE IMAGE AS” to store the image to your computer. Note that the snapshot records annotations and measurements that have been marked on the slide, along with associated text descriptions.

3.1.4 Slide Joystick

The slide Joystick is a simple control designed to allow users to “screen” a digital slide rather than examine field by field.



To use the joystick, click and hold your mouse over the blue button. As you move your mouse, the joystick will indicate which direction you are moving across the digital slide.

3.1.5 Information Window

The information window displays any additional details about the current slide, including slide name and tissue stain.



3.1.6 Colour Control

User's can adjust brightness, contrast and colour settings to optimise the digital slide for their monitor. These tools can be accessed from the COLOUR CONTROL button in the toolbar.

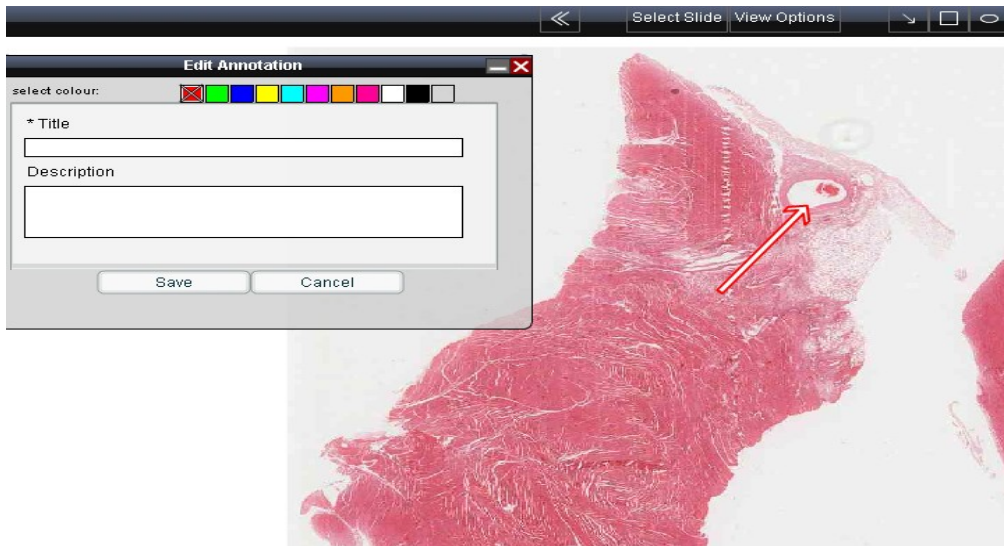
3.1.7 Annotating a Slide

You can add annotations to a slide. There are three options. You can add an arrow a box or an ellipse. These options are present on the toolbar at the top of the slide. To use one, click on the appropriate icon.



Annotation Options

When drawing an arrow draw towards the point which the arrow is indicating. It then allows you to edit the annotation which gives you a choice to give the annotation a title and a description. The image then has an arrow present on it and when the mouse is placed over it the title and description will appear. The annotation can also be found on the annotation list.



In the same way a box or an ellipse can be drawn to highlight a particular region. These annotations also allow you to give the annotation a title and description and when completed they can also be found on the annotation list.

4. Performing a Search

You can switch to Search mode by clicking on the 'Search' tab.

4.1.1 Saved Searches

Distiller provides the functionality to save search configurations so that the same search can be run repeatedly by the same or a different user. When you click on the search tab you are brought to the 'My Searches' page. This page lists all searches that you have saved, along with any searches that other users have chosen to share.

To run a saved search, click on the hyperlink beside the search. Or alternatively click on the stats icon to go straight to the search statistics associated with the search results.

You can edit the saved search by clicking on the edit button.

The constraints and output fields of a search can be changed by clicking the configure buttons beside the saved search.

Run a saved search

4.1.2

Edit saved search 'description'

Edit saved search constraints

Edit saved search output parameters

View search statistics

Delete saved search

Create new search

MY SAVED SEARCHES:							
Name	Description	Shared	Edit	Constraints	Output	Stats	Delete
Example Search	Constraints: Find all goat species having a cerebellum digital slide and a copper deficiency atiology. Output: Case Ref, Display Species, Age, Tissue/Stain, Diagnosis and Atiology .	y					
Cor Lenghaus	Constraints: Find all species with an aetiology of Listeria monocytogenes	y					
Cor Lenghaus	Constraints: Find goat and deer species having digital slides with an aetiology of Herpesvirus and a diagnosis of Malignant Catarrhal Fever	y					
Cor Lenghaus	Constraints: Find all pig cases with digital images with an aetiology of Actinobacillus pleuropneumoniae	y					
Cor Lenghaus	Find all pig cases with digital images with an aetiology of Herpesvirus and a Comment of Aujeszky's Disease	n					
Cor Lenghaus	Constraints: Find Horse Cases with digital images of Pneumonia	n					
Create New Saved Search							

Apply Search Constraints

To begin a search you must have to apply search constraints. A list of all data groups is displayed. To apply constraints from any of these groups you need to click on the hyperlink given for that group. Multiple attributes can be selected across all of the data groups. When the search constraints have been selected, you can click the button to select the output fields.

Help Contact Logout

Distiller Version 1.1 Welcome Sean Costello

Browse Search

Home: (Animal Health Australia)

My Searches Constraints Output Results Statistics

*****Configuring constraints for new saved search: Example Search*****

Step 1 of 2: Apply Search Constraints

Configure specific attribute constraints

Animal Record

Parameters	Values
Case reference short text	<input type="text"/> <input type="checkbox"/> exact match <input type="checkbox"/> NULL <input type="checkbox"/> NOT NULL
Age short text	<input type="text"/> <input type="checkbox"/> exact match <input type="checkbox"/> NULL <input type="checkbox"/> NOT NULL
	<input type="checkbox"/> Deer (2) <input type="checkbox"/> Sheep (0) <input checked="" type="checkbox"/> Goat (1) <input type="checkbox"/> Dog (3) <input type="checkbox"/> Horse (4) <input type="checkbox"/> Pig (0) <input type="checkbox"/> Flying Fox (0) <input type="checkbox"/> Bat (1) <input type="checkbox"/> Human (2) <input type="checkbox"/> Oyster (3) <input type="checkbox"/> Trout (4)

4.1.3 Select Output Data

Next, you need to choose the attributes that you would like to be displayed in the search results. This is done in the same way as the constraints by clicking on the hyperlink for the data groups and checking the checkbox for each attribute.

Any existing output that has been selected is listed at the top of the screen. Hit the search button and it will perform the search and bring you to the results page. Alternatively the statistics button will bring you straight to the statistics for that set of results.

My Searches Constraints Output Results Statistics

*****Configuring output for new saved search: Example Search*****

Step 2 of 2: Select Output Data

Animal Record

Animal Record	<input type="checkbox"/>
<input checked="" type="checkbox"/> Case reference	
<input type="checkbox"/> Age	
<input checked="" type="checkbox"/> Species	
<input checked="" type="checkbox"/> Breed	
<input type="checkbox"/> Sex	

Digital Slides

Digital Slides	<input type="checkbox"/>
<input type="checkbox"/> Slide ID	
<input type="checkbox"/> Title	
<input type="checkbox"/> Date	
<input type="checkbox"/> Description	
<input checked="" type="checkbox"/> Aetiology	
<input checked="" type="checkbox"/> Diagnosis	
<input type="checkbox"/> Comments	

Select All Deselect All Save and run Search

4.1.4 Search Results Page

The search results page displays both the search results and constraints. The number of displayed records can be increased by selecting the required number in the drop down menu. You can also navigate through the search results using the 'back', 'next', << (go to the start) and >> (skip to the end) buttons.

SEARCH RESULTS: Total Number of Rows 312 (page 1 of 16)												
View Full Record	Animal Record					Digital Slides						
	Case reference	Age	Species	Sex	Breed	Slide ID	Title	Date	Description	Aetiology	Diagnosis	Comments
<input type="checkbox"/>	NRDAP D0156	Adult	Goat			385	D0156-8519	2007-06-16	Nasal Turbinate		Polypoid Adenocarcinoma	
<input type="checkbox"/>	NRDAP D0156	Adult	Goat			386	D0156-8520	2007-06-16	Nasal Turbinate		Polypoid Adenocarcinoma	
<input type="checkbox"/>	NRDAP D0156	Adult	Goat			387	D0156-8521	2007-06-16	Nasal Turbinate		Polypoid Adenocarcinoma	
<input type="checkbox"/>	NRDAP D0149	4 mo	Goat		Saanen	576	D0149-8362	2007-06-08	Cerebral Cortex		Meningoencephalitis	Toxoplasmosis
<input type="checkbox"/>	NRDAP D0147	3 yo	Goat	F	Angora	306	D0147-8180	2007-05-21	Optic Nerve- TS	Stypandra Toxicity	Myelin Oedema / Spongiform Encephalopathy	
<input type="checkbox"/>	NRDAP D0145	1 yo	Goat		Angora	353	D0145-8419	2007-06-10	Abomasum		Parasitic Abomasitis	

4.1.5 Save a Search

The configuration of a search i.e. constraints and output can be saved, so that you or another user can run the search again at another time. This can be done by clicking the 'save search config' button at the end of the search results page. This button will redirect you to a form where you can enter details of the search such as a name and description. You have the option to share the search, if you select this checkbox, then all other users of the dataset will have access to the search. When you select the save button, your search will appear in the 'My Searches' tab.

4.1.6 Output to CSV File

In the search and statistics tabs, your search results can be saved to a .csv (comma separated file) so that you can import them into a spreadsheet or statistical program by selecting 'Generate CSV File'.

For more information please contact:

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