

Orchard® Harvest™ LIS Easily Handles Hagyard's Uniqueness

At Orchard we like to say that no two labs are alike, and for Hagyard Equine Medical Institute, that is most certainly the case. For more than 130 years, Hagyard has served as one of the major equine veterinarian institutes in the country. Located in Lexington, Kentucky, Hagyard employs more than 60 veterinarians with varying specialties, and offers a wide range of services including a surgery center, pharmacy, MRI, fertility center, field care team, and a laboratory to its horse patients.

“The laboratory operates much like a human lab, but with different normal ranges,” says Tina Elam, Laboratory Manager at Hagyard. “We run all the standard tests like hematology, fluid analysis and cytology, chemistry, microbiology, and blood banking, but the tests performed in our lab cater to the specific needs of our equine patients.”

Currently the lab serves 60 in-house vets, and also does work for approximately 100 outside veterinarian practices from all over the United States. “Our work is seasonal,” explains Tina. “We have a foaling and breeding season (January through July) and then an off season.” During the prime season, the lab can receive between 400 and 700 samples daily.



Hagyard Equine laboratory employees from left to right: (Front Row) Tina Elam, Chen Tai, Martha Brown, Debbie Powell, (Back Row) Susan Wilson, Angie Bradley, Susan Adams, and Karen May.

In the off season, the volume decreases to 200 to 500 a day.

The lab is staffed by eight licensed MTs and MLTs, and one of those on staff holds a Master's degree in Animal Science. “We are one of the very few veterinarian

labs that is run by licensed MTs and MLTs,” says Tina. This fact has benefited Hagyard when dealing with its clients. “Our vets respect our knowledge,” shares Tina. “They regularly ask for our opinion regarding the results and consult with us on diagnosis.”

Microbiology Technologist, Martha Brown, says implementing Orchard Harvest LIS has helped make Hagyard's relationship with its vets stronger. “Prior to using Harvest LIS, we would call all our results to our vets. Now we can email the results to their PDAs and copy the horse farm as well,” explains Martha. “Our vets really like that they can access their results anywhere, because they are in the field a lot.”

Harvest LIS was not the first LIS at Hagyard, but growth caused the lab to search for a new system that could keep up with their increased volume and complexity. “There was just no comparison to Harvest. We looked at several other systems, but when Orchard came to demonstrate their product, they sent two med techs who could answer our questions

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Roland Soe: Installation Project Manager



Roland Soe has been with Orchard for nearly seven years. During his tenure, he has proven himself to be a man who possesses many skills and is able to quickly adapt to any task put before him. Upon joining Orchard in February 2003 as a Systems Engineer, Roland attended one of our System Administration classes with new Harvest LIS users. About a year later while working at West Texas Cancer Center, Roland ran into one of our clients who had attended the same System Administration class. She told Roland that she remembered him from the class because he had that “deer in the headlights” look on his face the entire week. Now more than six years later, Roland laughs about that encounter.

After working as a Systems Engineer installing Harvest LIS and Copia systems, Roland moved into the interfacing department, and then, about two years ago, became an Installation Project Manager.

Prior to working at Orchard, Roland worked as a research scientist, developing reagents for automated analyzers with Seradyn, Inc. (now Thermo Fisher Scientific). He is a graduate of Purdue University and IUPUI with a Bachelor of Science Degree in Chemistry and Medical Technology.

Roland has been married to his wife Jennifer for 11 years. They have three girls, Karina (9) and twins Madeline and Caroline (7).

Roland’s free time is happily devoted to his family, but he also manages to find some spare time to enjoy mountain biking and snowboarding. ●

Hagyard

Continued from previous page.

and knew what we were doing,” recalls Tina. Ultimately it was Harvest LIS’ flexibility to accommodate the specific issues and workflow that led Hagyard to make its purchasing decision. “Our lab is unique, and the ability of a system to be configured around our special needs was important,” says Tina.

Since implementing Harvest LIS, Hagyard has seen improved turnaround times through batch reporting, faxing, and emailing. “Our results can be reported faster, which means our clients are happier,” says Martha. “We are even able to look up orders and results quicker because of the browsers.” Tina agrees with Martha and says that the results browsers in Harvest LIS have also been a help to the vets when they are writing research studies or making presentations. “Everything is at our fingertips,” says Tina. “The Result Browser has been a very useful tool to generate reports used in comparative analysis and for the prediction of early diagnosis of disease and research.”



An aerial view of Hagyard Equine Medical Institute’s Lexington, Kentucky, campus.

“There are so many great features that Harvest offers,” says Tina. “It is hard to pick a favorite, but the technical support service is exceptional. We are always able to reach someone, and if we have to leave a message, we get a call back. Orchard knows what they are doing.” ●

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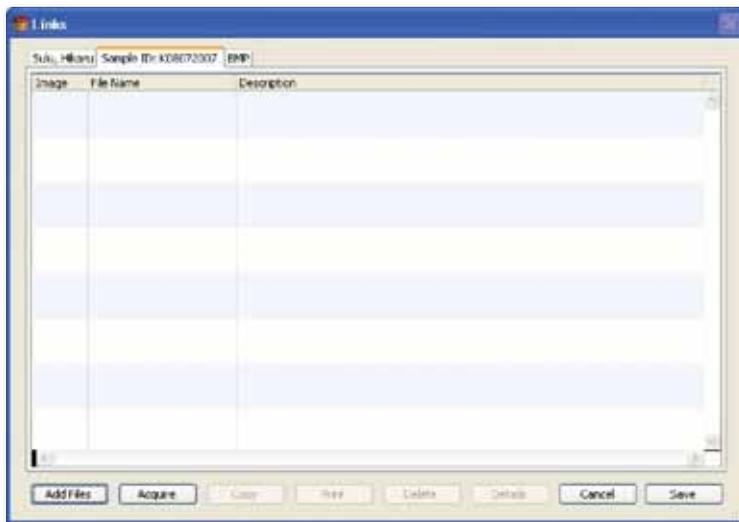
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www.orchardsoft.com/news_links/newsletter/newsletterarchive.html

Feature Focus: TWAIN

In the Spring 2007 issue of *news@orchard*, we covered how the Automated Document Linking interface could be used to link important documents such as requisitions, signed ABNs, and reference lab reports to a patient or order in Harvest LIS.

In the July 2009 build of Orchard Harvest LIS 8.0, we have also made it easier to scan documents manually by adding support for TWAIN devices. TWAIN is a standard software protocol and applications programming interface (API) that regulates communication between software applications and imaging devices such as scanners and digital cameras. With more and more content becoming digitized, importing documents and images is becoming an important feature for the LIS.

Using a TWAIN-compliant device with Harvest LIS is very simple. The scanner or camera's software must be installed according to the manufacturer's directions. You can then open the Links window from all the usual places in Harvest LIS: Review Results, Micro and AP worksheets, patient file, Instruments table, and Review Quality Control. If you have Orchard Pathology, you will notice a new menu item for Link test types: "Acquire TWAIN Image."



Click the **Acquire** button. Harvest LIS displays a dialog, allowing you to select your TWAIN device.

Once you have selected your TWAIN device, it will remain set unless Harvest LIS Client is restarted. You can configure Harvest LIS to always display the "Set TWAIN Device" dialog:

```
[ TWAIN ]  
AlwaysAskToSetDevice=True
```

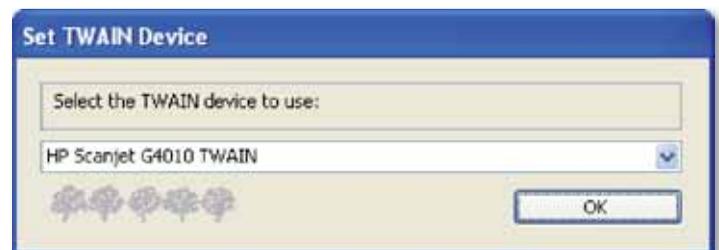
This ACO is useful if there is a need to switch the selected TWAIN device on a regular basis.

The window that appears after you have selected your TWAIN device will vary, depending on the software supplied by the scanner or camera's manufacturer, but most will have options to select and import an image.

You may consider adding an ACO to hide the TWAIN device's user interface:

```
[ TWAIN ]  
HideDeviceDialog=True
```

This could be useful where the only action on the TWAIN interface window is to click OK. Note this should not be set unless you are certain the only action would be the import of an image. Since all TWAIN devices can have their own user interface when acquiring an image, this ACO should be used with caution. Also, note that each TWAIN device could ignore the option to hide the dialog.



What does "TWAIN" mean?

The word TWAIN is not an official acronym; however, it is widely known as "Technology Without An Interesting Name."

The official TWAIN working group was originally launched in 1992 by several members of the imaging industry, with the intention of standardising communication between image handling software and hardware. The word TWAIN is from Rudyard Kipling's *The Ballad of East and West* — "...and never the twain shall meet..." — reflecting the difficulty at the time of connecting scanners and personal computers.

--source, Wikipedia

After performing the actions needed in the device's TWAIN interface, the acquired image will appear in the Link list. You may add descriptions if necessary, and must click the **Save** button to finish saving the new link(s).

Using the new TWAIN support in Harvest LIS, it is now easier than ever to import linked documents into Harvest LIS. Should you need assistance configuring your system to use TWAIN devices, please call Orchard Technical Support at **(800) 571-5835**. ●

Document Linking in Orchard® Copia®

With the recent addition of the patient-level document linking capability, we decided it would be an excellent time to discuss linked documents in Copia.

Types of Linked Documents

Copia supports various types of document linking:

- **Result Linking:** Externally generated files that you may manually link to order choices or that Copia automatically links to order choices when it finds valid files in a specified directory. Valid file types are PDF, HPDF, JPG, GIF, and BMP.

HPDF files contain report contents from Harvest LIS that Copia inserts in place of the report contents that it receives via HL7.

Copia also treats form letters generated from order entry rules and result evaluation rules as result-level linked documents.

- **Order Linking:** Externally generated files that you may manually link to orders or that Copia automatically links to orders when it finds valid files in a specified directory (e.g., a scan of a paper requisition). Valid file types are PDF, JPG, GIF, and BMP.
- **Patient Linking:** Externally generated files that you manually link to patient records. Valid file types are PDF, JPG, GIF, and BMP.

Manually Linking Files

You may manually link one or more external results or other files to an existing order choice, order, or patient file on the Linked Documents page, as well as add or replace document links.

To access the Linked Documents page, click the **Linked Docs** button on the Order Patient Samples page. Note that you must have the “Edit Linked Documents” right associated with your assigned role to view the **Linked Docs** button.

To link a file, first click the **Browse** button to navigate to the file and select it. Next, enter a description of the file, and then select at what level Copia should link the file: result, order, or patient. For result document links, you must also select which order choice(s) the document should be linked to, as well as the status of the order choice (preliminary or final) and the severity of the result you are linking (normal, abnormal, or critical).

If you are linking a new document, click the **Proceed With Link** button. If there are one or more existing result, order, or patient links, select “Keep” or “Replace” next to the linked documents to indicate whether the new file replaces or is in addition to the existing linked document. To view an existing linked document, click the Document ID link. Once you have made your selections, click the **Proceed With Link** button.

After you link the files, Copia will post the document(s) and generate and deliver reports as appropriate.

Setting up Automatic Order & Result Document Linking

On the Interface Configuration page for a selected host, use the “Order Linked

Document Path” and “Result Linked Document Path” fields to enter the path to the directory where Copia should look for files to add as linked order or result documents. As you are setting up the directory path for result document linking, you may modify some additional settings, including how long Copia waits to check for documents and whether the filename format for linked result documents should include the patient’s last name.

When Copia finds files in the specified directories, it moves the files from the directory to the Inbound Queue, where it processes them and allows you to view the file and edit the filename.

For automatic document linking, Copia uses the filename to identify the order or order choice to which it should link the new files. Note that for order document linking, the filenames should contain either the Copia Order ID or a Copia Sample ID that is unique to a single order sent to a host. For result document linking, filenames should contain Sample ID and Patient First Name at a minimum, and they may contain Patient Last Name, Order Choice Host Code,

Status, and Flags, with each element listed in that order and separated by an underscore character (“_”).

When Copia finds a filename match for order documents, it links the file to the order. If it finds an order choice host code in the filename, Copia posts the results to an existing order choice on the order, if possible, or it adds the specified order choice to the order. If there is no order choice host code in the filename, Copia generates a new order choice for the order.

Copia marks as “Failed” any files that it cannot link to the intended order or order choice. If there is a problem linking the files, you may view the error on the Inbound Queue page. ●

Tech Tip: Documenting Critical Results, Abnormal Results, or STAT Orders When Approving

Based on your Preferences or Advanced Configuration Options (ACOs), Harvest LIS may require you to enter additional information when you approve a critical result, abnormal result, or STAT order.

Note that you must have the proper security permissions to approve results. To approve QC, you must have the “Approve QC Results” setting. To approve QC results that fall outside of the specified range, you must have the “Approve Out of Range QC Results” setting. You may configure these settings on the System Security Groups window.

Entering Comments for Result Approval

1. When approving a result, Harvest LIS can force the user to enter documentation before approving. If you want Harvest LIS to present a dialog to enter explanatory information when approving an order choice that has a critical result, mark the “Document criticals when approving” checkbox on the Miscellaneous tab of Preferences. This feature applies when approving critical patient results, and also when approving QC results that are critical ($>3SD$). Note that in order for the Critical Result dialog to appear, the “Highlight Criticals” checkbox must be marked in the Lab Tests table for a test contained in the order choice.
Important: You may modify your ACOs (see below) to *not* apply this feature to QC results and only display a documentation dialog for patient results. Alternatively (beginning in version 8.0.090413), you may modify your ACOs to *not* apply this feature to patient results if you wish to only apply it to QC results.
Important: You may modify your ACOs to display a documentation dialog when approving abnormal results and/or STAT orders.
2. In the Critical Result dialog, enter your own text, or click the ... button to enter a standard comment.
3. Choose whether the comment should appear on reports. Mark the “Don’t Report” checkbox if you do not want the comment to appear on the report.
4. Select the “Append critical test list” checkbox to append a comma-separated list of the critical tests in parentheses to the end of the comment. You may have Harvest LIS automatically select this checkbox by marking the “Append critical test list automatically” option on the Miscellaneous tab of Preferences.
5. By default, Harvest LIS marks the “Order choice comment” option to save the comment at the order choice

level. Select the “Test comment” option to save the comment at the test level instead. You may modify your Advanced Configuration Options to change the default selection (beginning in 8.0.090413).

6. Click **OK** after entering your comment.
7. Click **Cancel** if you do not wish to approve the selected result. If multiple items are being approved, note that all non-critical items will still be approved.

Advanced Configuration Options

You may also use ACOs to modify result documentation in Harvest LIS. Open the Advanced Configuration Options window from the File menu, or by pressing [Ctrl] [F]. In this window, you may enter any of the following settings in the [Comments] section.

• Enabling on Select Workstations

`CriticalResultApproval=true`

The “Document criticals when approving” setting on the Miscellaneous tab of Preferences is a system-wide setting. Set this ACO to true in order to only use this feature on *selected* workstations.

• Suppressing the Critical Result Dialog

`DoNotDocumentCriticalQC=true`

Default is false. Set to true to suppress the Critical Result dialog for all QC results flagged as critical. If you use this ACO, **Harvest LIS will *only* display the Critical Result dialog for patient results, and not QC results.**

Important: This ACO entry is often enabled during initial setup and installation. In this case, you will need to either remove the DoNotDocumentCriticalQC ACO or set it to false in order to activate documentation for critical QC results.

`DoNotDocumentCriticalPatient=true`

Default is false. Set to true to suppress the Critical Result dialog for all patient results flagged as critical. If you use this ACO, **Harvest LIS will *only* display the Critical Result dialog for QC results, and not patient results.**

• Abnormal Result Dialog

`CriticalNotificationWhenAbnormal=true`

Default is false. Set to true to display the Abnormal Result dialog when **approving abnormal results**. Beginning in version 8.0.090413, Harvest LIS changes the “Append critical test list” checkbox to “Append abnormal test list.”

See “Documenting Critical Results” on page 6.

Documenting Critical Results

Continued from previous page.

Note that the “Document criticals when approving” setting and [Comments] CriticalResultApproval ACO override this ACO if any of the results for the order choice are critical.

This ACO applies to both QC and patient results. Abnormal QC results are results between 2SD and 3SD.

Note: Beginning in version 8.0.090413, you may split the functionality of this ACO with either of the following entries:

```
CriticalNotificationWhenAbnormalQC=true  
CriticalNotificationWhenAbnormalPatient=true
```

Default for both is false. Set CriticalNotificationWhenAbnormalQC to true to force documentation and display the Abnormal Result dialog for QC abnormal results. Set CriticalNotificationWhenAbnormalPatient to true to force documentation and display the Abnormal Result dialog for patient abnormal results. Note that rather than setting both of these ACO entries to true, use the ACO CriticalNotificationWhenAbnormal instead, because it applies to both QC and patient results.

• STAT Order Dialog

```
CriticalNotificationWhenSTAT=true
```

Default is false. Set to true to display the STAT Order dialog when **approving orders with STAT priority**. Harvest LIS removes the “Append critical test list” checkbox. This ACO does not apply to QC results.

Note that the “Document criticals when approving” setting, [Comments] CriticalResultApproval ACO, and [Comments] CriticalNotificationWhenAbnormal ACO override this ACO if any of the results for the order choice are critical or abnormal.

• Overriding Defaults

```
ReportableCriticalResult=true
```

Default is false. Set to true to override the ACO [Comments]Reportable=false on the Critical Result dialog. The “Don’t report” checkbox will remain unmarked when opening the dialog.

```
CriticalNotificationDefaultTest  
Comments=true
```

Default is false. Beginning in version 8.0.090413, set to true to mark the “Test comment” option by default (instead of the “Order choice comment” option) on the Critical Result dialog.

```
CriticalResultApprovalOmitMicro=true
```

Default is false. Set to true to suppress the Critical Result dialog when approving critical microbiology results.

• Comment Formatting

```
CriticalResultInfo=<info>
```

Configure this ACO to automatically include and format order information in the comment when approving critical results (QC or patient). You may use one or more of the following merge fields to insert the desired text:

- Patient Values: ~dob, ~patID1, ~patID2, ~patID3, ~patID4, ~patID5, ~patIDCopia, ~patName, ~patPhone1, ~patPhone2
- Provider Values: ~docFax, ~docName, ~docPhone
- Location Values: ~drawLoc, ~drawPhone, ~orderLoc, ~orderPhone
- ~linebreak = Line break for formatting purposes
- ~resultListAbnormal = Comma-separated list of test names with abnormal results
- ~resultListCritical = Comma-separated list of test names with critical results

Note that the phone number merge fields will include the extension if one exists.

Example:

```
CriticalResultInfo=Patient:  
~patName (DOB: ~dob)~linebreakProvider:  
~docName~linebreakOrder  
Location: ~orderLoc~linebreakPhone:  
~orderPhone~linebreakCritical results:  
~resultListCritical
```

[K08041006] Basic Metabolic Panel Critical Results

Please provide additional details about the critical results being approved.

Don't report Append critical test list Order choice comment Test comment

Patient: Wright, Darrin (DOB: 04/01/1980)
Provider: Schneider, Martin C
Order Location: Schneider & Anderson
Phone: (317) 573-2515, Ext. 1001
Critical results: K(2.8), GLU(410)

Cancel OK

Orchard Harvest LIS Version 8.5 is Now Available!

Orchard Software is pleased to announce the release of Orchard Harvest LIS version 8.5! To take advantage of the new features and keep your Harvest LIS up-to-date, please go to the Orchard website www.orchardsoft.com and complete and submit the online Request for Upgrade form.

Orchard is committed to developing, installing, and supporting the very best laboratory information system, and regular software upgrades are part of this commitment. The feedback from you, our customers, is what drives the continuous development of Harvest LIS, providing you with an expanding list of features for greater flexibility and the ability to handle a variety of laboratory workflows and business situations.

Of the more than 140 enhancements and added features, approximately 75 requests for modifications (RFMs) were included. The continuous feedback from our customers is what makes Harvest LIS a leader within the industry. Here are just a few of the new enhancements in Harvest LIS 8.5:

- Additional options for data mining, such as the option to create pie charts using numeric data in the data browsers.
- Unlimited user defined fields for order choices, tests, locations, personnel, and patients. This feature allows facilities to store additional information required for their unique situation or state and local regulation compliance.
- Smart labeling features are now available. Harvest LIS

will add the required volumes of all the order choices on an order using the same tube type, and calculate the number of container labels to print based on the minimum volumes and yields of the chosen containers. This is especially useful in cases where multiple tests are ordered with the same sample type.

- Enhancements to the database allow for greater scalability of 64-bit hardware and 64-bit operating systems, including Windows Server 2008.
- Greater data storage capacity provides the option for less archiving so that more data can be kept online for reports and analysis.
- Improved scalability through multi-threading and multi-core awareness. The new database server takes advantage of all available processors, providing much greater throughput and faster response times throughout the application.
- Full TWAIN interface capabilities provide for manual scanning and storing documents.
- A modularized interface engine allows you to get updates to your instrument interfaces separately from upgrading your main Harvest LIS application.

To take advantage of all the new features and keep your Harvest LIS up-to-date, please go to www.orchardsoft.com and submit the online Request for Upgrade form in a timely manner. Remember, upgrades are on a first come, first served basis, so don't delay. Be one of the first to implement and enjoy all the new features of Harvest LIS version 8.5! ●

Orchard will be closed on the following holidays:

Thanksgiving:

- Thursday, November 26, 2009
- Friday, November 27, 2009

Christmas:

- Thursday, December 24, 2009
- Friday, December 25, 2009

New Year's Day:

- Thursday, December 31, 2009
- Friday, January 1, 2010

Note: An Orchard Technical Support Representative will be on-call 24/7 for emergencies at (800) 571-5835.



Where in the World is Orchy?

Orchard's unofficial mascot, Orchy, continues to travel. Last newsletter, Kathie Heath of Wilmington Health Associates in Wilmington, North Carolina, knew that he was visiting Charleston, North Carolina. If you can identify where Orchy is visiting, send your answer to news@orchardsoft.com by November 15 to be eligible to win an Orchard prize package. Sign in to the Orchard website to see where in the world Orchy has been lately! ●



Announcing New Sales Channel Partners with Orchard

In the near future, you may see some industry press and news regarding our new distributor agreements with Cardinal Health and Fisher HealthCare. We wanted you to learn of it first from us and to understand that these distributor relationships will have no effect on the relationship between Orchard and our current or future customers.

In an effort to enhance the distribution and sales of Orchard's laboratory information systems to new prospective customers, Orchard aligned itself with Cardinal Health and Fisher HealthCare. In conjunction with Orchard's sales staff, these distributor relationships will increase our sales opportunities for new Orchard systems by providing hundreds of Cardinal and Fisher representatives with the opportunity to talk to their laboratory clients about an Orchard LIS.

It is our desire to enhance our connection with as many laboratories as possible, so they can be fully aware of Orchard's products, see how they can be of benefit to their lab, compare their options, and make a well-informed decision regarding their purchase of a new lab system.

We are excited about these relationships and the opportunity they provide. Thank you for your continued support and if you have any questions, feel free to contact your Orchard Account Manager at **(800) 856-1948**.

Orchard's Trade Show Calendar 2009

Date	Name	Location
10/11-10/14/09	CAP '09-THE Pathologists Meeting	Washington, DC
10/11-10/14/09	MGMA 2009 Annual Conference (Medical Group Management Association)*	Denver, CO
10/29-11/1/09	ASCP 2009 Annual Meeting (American Society for Clinical Pathology)	Chicago, IL
10/29-10/30/09	Central New York CLMA	Verona, NY
11/5-11/7/09	NextGen Users Group Meeting	Orlando, FL

* Orchard is not exhibiting

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Orchard Harvest LIS 8.5!**