



Justice Facts

WINTER 2017

SIMON SAYS

2016 Closes with a Strong Finish

As you know, we've just finished up a very successful User Group Meeting, and I wanted to take a moment to thank both our staff and you - our customers - for that success. One of the most interesting phenomena for me were the conversations I had during the conference. I was pulled aside by a number of the senior representatives of our customers, and whether they used version 3, version 5 or ChainLinx, they all told me a variation on the same story. They told me that they saw a new energy at JusticeTrax and shared their feeling that we had passed some kind of major milestone that they were having trouble describing exactly. All they knew for sure was that it felt good to them, and they were optimistic about our future together. I have to admit that I feel the same way. The company has a depth of talent, confidence and commitment that is making a big difference to the people we serve, and I trust that you feel it, too.

By now, many of you will have heard the exciting and important news that we recently announced our intention to release a brand new version of LIMS-plus: version 3.8. This updated version will be



Simon Key
President
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available as early in the new year as is feasible. It is a development effort that we did not announce until now, and it has been well received overall.

LIMS-plus v3.8 is a ground-up rewrite of the LIMS-plus v3.7 software with the goal of eliminating all Visual Fox-Pro code while retaining the existing investment in the database. It further adds the ability to deliver the application through a browser and provides a robust application programming interface. LIMS-plus v3.8 represents an

option that we felt we owed to our customers who either did not want to go through the re-implementation process that LIMS-plus v5 requires, or who don't need the advanced features it offers.

Our decision to keep the development closely held was based on past experience when we announced our intentions before we understood all the challenges we would have to solve. Our customers' natural need to make plans based on hard delivery deadlines often put pressure on development, leading to a lack of flexibility when it came to making architecture decisions.

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2016 Closes with a Strong Finish

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By keeping this development under wraps, we were able to take the time to discuss and adjust our development approaches without having to revise public delivery schedules. As I've said on numerous occasions, this in no way alters our commitment to LIMS-plus v5, and we will continue to move forward with this secure and flexible version of LIMS-plus.

In this issue of JusticeFacts, you'll be able to read up on how to use signatures in Crystal Reports whether you use LIMS-plus v3.7 or LIMS-plus

v5. You'll also get some valuable information on upgrading from LIMS-plus 3.7 to 3.8 as well as a profile on one of our newest customers and one of our key employees.

2016 has been a great year for JusticeTrax, and I'm optimistic and excited about what 2017 will bring. On behalf of all of us at the company, I wish you and your loved ones a happy holiday season and best wishes for the New Year! 

The Evolution of LIMS-plus v3



Jenna Oakes-Smith
Implementation
Specialist
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Although just announced at the 2016 User Group Meeting, JusticeTrax has been working since 2014 to create a replacement for the client-server technology behind LIMS-plus v3.7. The fruit of that labor comes in the form of LIMS-plus v3.8, a browser-based update that completely replaces the current FoxPro application with the approach outlined in this article.

Since the updated application is browser delivered, it removes the client footprint on each user workstation and allows users to log in and work from any network attached computer, including using VPN connectivity. It also drastically simplifies the application update process as administrators are no longer required to change individual client workstations.

While v3.8 marks a significant change to application platform, it does not require customers to implement a new database or data structure. This conserves the large investment that customers have made in their data over the years, or in some cases even decades. Also, since the database is the same, customers can continue to use their existing Crystal Reports templates. The value of existing data cannot really be overstated, which is why

JusticeTrax worked so hard to preserve it for our customers.

The tangible value of the v3.8 update goes beyond that of data conservation, however. The customer's personnel resources are also conserved in the form of minimal retraining of their staff. The application has been tested by current and former LIMS-plus v3 users against existing customer databases throughout the course of development to ensure that the feel of the application is preserved along with the data. The update itself is also provided at no additional costs, since upgrades are included in the Software Maintenance Agreement that customers enjoy.

The LIMS-plus v3.8 update is the culmination of three years' worth of work for JusticeTrax developers, but it preserves and builds upon the many years of success that customers and our company have enjoyed with the v3 product. The new version will be installed in early 2017 as a Beta application for a handful of volunteer customers.

The value of existing data cannot really be overstated, which is why JusticeTrax worked so hard to preserve it for our customers.

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The Evolution of LIMS-plus v3

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Data Access Layer (DAL)

Based on the popular tool LLBLGen ORM (Object Relational Mapper), the Data Access Layer wraps the relevant LIMS-plus v3.7 (v3) database tables into object-oriented classes. These classes are consumed by the business layer.

Business Layer (BL)

The Business Layer contains the business logic, extracted and translated out of the prior FoxPro client and organized into c#.Net objects. These objects are responsible for behaviors that match LIMS-plus v3 client functionality, including database read/write & transactions and log-in / log-out with role based security.

Web Client

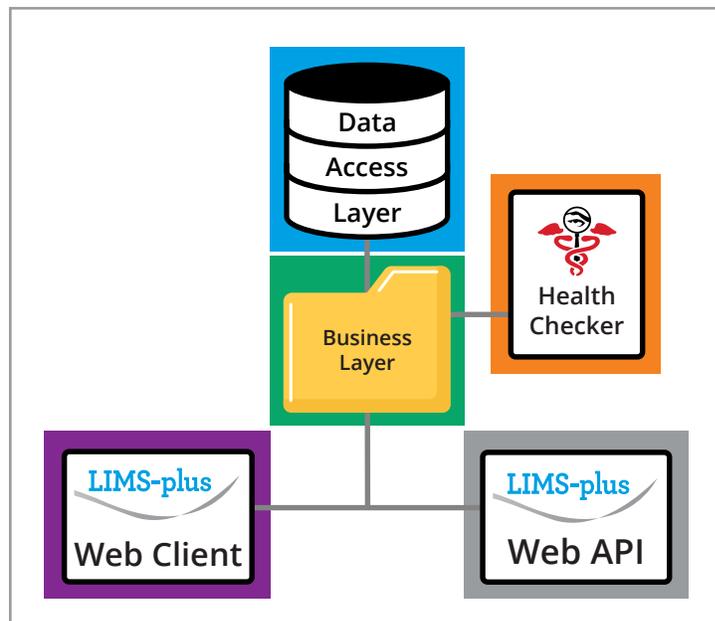
The web client is the ASP.Net user interface wrapper for the Business Layer, which provides the core user experience with a familiar LIMS-plus v3 look and feel, reducing or eliminating retraining of end users.

HealthChecker

The HealthChecker application is a purpose built wrapper for use by DBAs/System Administrators to provide feedback on system health. On demand, the HealthChecker will scan laboratory data looking for broken rules and problems.

Typically, it is run prior to upgrading to the new LIMS-plus v3.8 technologies but after v3.8 upgrade scripts have been run against the database. Since cases containing broken BL rules will open as read-only in v3.8, the HealthChecker helps to identify any potential issues that may be encountered during/after upgrade. Once issues are corrected, cases will open in full edit mode so the HealthChecker can be used to determine what data edits may be warranted before implementation of v3.8.

Customers may wish to assess and correct their entire database or only those recent cases which are likely to be reopened. As such, the HealthChecker can be configured to assess a range of cases based on their open date, to search sequentially forward from an existing case number or even to review a single case. Customers can also choose to review transfer information, orphan image or file records and search for files that are considered by the lab to be “oversized.” 



Web API

The Web API provides an interface for custom applications and integrations. The Application Program Interface (API) is a set of method calls to the Business Layer implemented in C#.NET and written to representational state transfer (ReST) principles.

2016 User Group Meeting



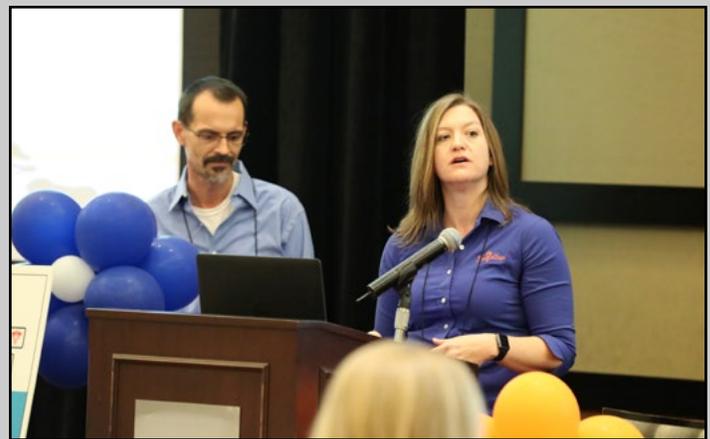
Simon Key Delivers the Opening Remarks



Stuffed Animals and Balloons Decorate the Conference Room



Tiffany Eckert, Sara Roper, & Anne Moody Present



Sean Wegele and Jenna Oakes-Smith Demo LIMS-plus v3.8 and HealthChecker



Attendees at the OpenSpace Portion



Wednesday's Dinner and Event were Held at the Phoenix Zoo

Customer Focus: Internal Revenue Service National Forensic Laboratory

Barry Fisher

Jennifer Cones heads the National Forensic Laboratory, Criminal Investigation Division of the Internal Revenue Service, United States Treasury

The Criminal Investigation Division of the Internal Revenue Service, United States Treasury Department, operates its National Laboratory (NFL), headquartered in Chicago, Illinois. The NFL was awarded its first accreditation by ANAB in May 2015 under ISO/IEC 17025. The NFL has been examining evidence and supporting IRS investigations for more than 40 years. Examiners at the NFL report the results of forensic testing or technical services to investigators for use in the investigation of potential criminal violations of the Internal Revenue Code and related financial crimes. It services 25 field offices and approximately 2,000 agents across the Country. The NFL also assists other law enforcement agencies with financial crimes aspects of seized evidence.

Jennifer Cones heads the 28 person forensic laboratory. Jennifer began working for the IRS in May 2013; for the 12 years prior, she worked at the DuPage County Forensic Science Center as the Quality Manager and Criminalistics Section Supervisor, and also performed case work in latent

prints, firearms and tool marks. Jennifer holds a B.S. in Biology with a minor in Chemistry as well as an M.A. in Law Enforcement and Justice Administration.

The IRS laboratory is different from most forensic labs in that its principal focus is on cases related to financial crimes. The NFL offers forensic testing and technical services in electronics, imaging and trial illustration, latent prints, polygraph, questioned documents and ink chemistry.

The NFL began using JusticeTrax's LIMS-plus v5.3 in January 2016 and went "live" this past October. Laboratory staff spent approximately nine months configuring LIMS-plus and training laboratory staff on the configured system. Throughout the process, she was pleased working with JusticeTrax Implementation Specialists and other JusticeTrax team members, finding them responsive to the needs of her laboratory. Jennifer noted that she especially likes LIMS-plus's ability to be tailored for a user's particular requirements.

IRS Criminal Investigation laboratory customers will also be using LIMS-plus Portal. Jennifer is looking forward to continued improvements to LIMS-plus Portal, which will make it an even better fit for customers and their stakeholders. 

JusticeTrax Staff Changes in the Past Year

POSITION	FILLED BY	REPLACES
Product Development Manager	Sean Wegele	Don Fitzsimmons
Software Developer (APIs)	Contract with Don Fitzsimmons	Don Fitzsimmons (as employee)
Software Developer	Brendan Lacanette	New Position
Quality Manager	Paul Tracy	Simon Key
Implementation Specialist	Jenna Oakes-Smith	Paul Tracy

Welcome to JusticeTrax!

Since April 2016, the following have joined in using our applications:

CUSTOMER	LOCATION	CUSTOMER PRODUCTS	
Center for Applied Forensics Jacksonville State University	Anniston, AL	ChainLinx	
Houston Forensic Science Center	Houston, TX	LIMS-plus LIMS-plus DNA	LIMS-plus Portal CIMS
Jefferson County Regional Crime Laboratory	Golden, CO	LIMS-plus LIMS-plus DNA	LIMS-plus Portal CIMS
Pathway Genomics Corp.	San Diego, CA	LIMS-plus DNA	
Pinellas County Forensics Laboratory	Largo, FL	LIMS-plus LIMS-plus DNA	LIMS-plus Portal CIMS
Royal Canadian Mounted Police E Divisions	Victoria, British Columbia, Canada	LIMS-plus	



[View Interactive Customer Map Online >>](#)

LIMS-plus Awarded Five Year GSA Schedule 70 Contract Extension

The GSA exercised its option to extend their contract GS-35F-0023M with JusticeTrax by 5 years through October 11, 2021. This affects about 10% of its customers who have taken advantage of the reduced pricing and a more streamlined procurement process, since the pricing has been vetted by the GSA. Some states and units

of local government leverage the GSA contracts as part of streamlining their procurement.

In the letter announcing the five year extension, the GSA wrote: “We look forward to continuing our partnership with you.”

[READ MORE ONLINE >>](#)

Timing is Everything

Capturing Electronic Signatures when Setting Milestones



Brittany Cange

Implementation Specialist

[EMAIL](#)

Within LIMS-plus, the electronic signatures and initials of lab reps are collected and stored as part of each lab rep's profile. These signatures and initials can be displayed on final reports and worksheets. This article highlights the differences in signature storage and usage on Crystal Reports between the LIMS-plus v3 and LIMS-plus v5

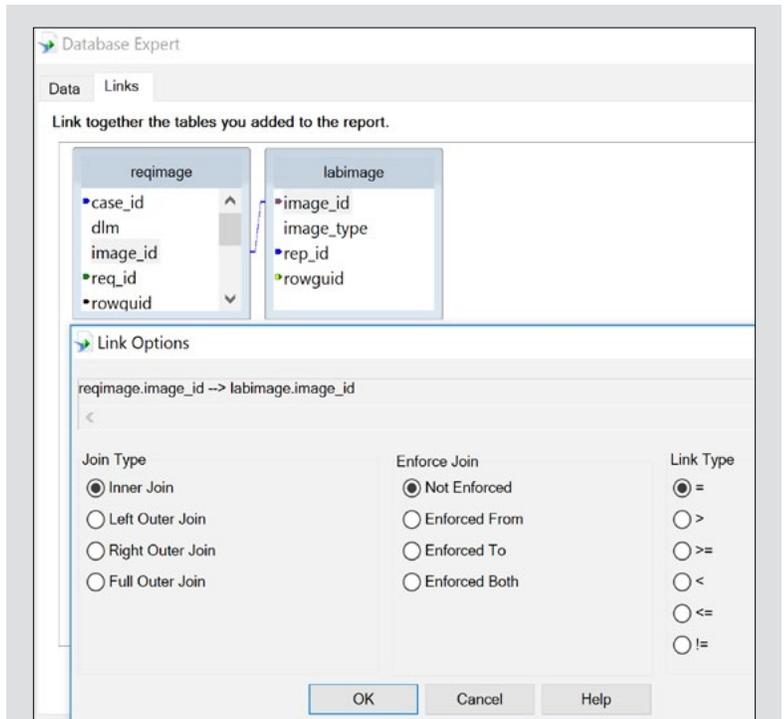
applications.

Signatures in LIMS-plus v3

LIMS-plus v3 stores signatures and initials within *dbo.labimage* and links each to a specific request via *dbo.reqimage*. An easy way to obtain specific signatures is through the creation of a sub-report for each signature, updating the selection formula for the appropriate signature role (via *dbo.reqimage.sig.role*), and displaying *dbo.labimages.sig_image* for initials (*labimage.image_type = 2.00*) or signatures (*labimage.image_type = 1.00*). This sub-report would then be linked to the main report via *requests.req_id*. To the right is the Crystal Report linkage for request related signatures and initials using the LIMS-plus v3 database in the sub-report.

Signatures in LIMS-plus v5

Due to the database structure of LIMS-plus v5, obtaining signatures on reports requires a different approach. When a lab rep completes a milestone on a request, the completed activity name and the lab rep ID of the individual who set the milestone is stored in *dbo.RequestWorkflowExecutionRecord*, after the milestone is set. Incorporation of this table into a Crystal Report for the purpose of displaying milestone signatures as they are set (i.e on a worksheet as Draft Complete is set or on a report after the releasable milestone is met) will cause the application to display a "loading" screen, as the report is constantly looking for a signature that has



LIMS-plus v3: Crystal Report Linkage for Request Related Signatures and Initials

not yet been written to the database table. An IIS reset is required to clear out this report that cannot finish processing.

To display signatures and initials on a Crystal Report in real time, JusticeTrax created four database views that correspond to the four signature milestone activities:

- vRequestWorkflowExecutionRecord_Draft**
- vRequestWorkflowExecutionRecord_Other**
- vRequestWorkflowExecutionRecord_Tech**
- vRequestWorkflowExecutionRecord_Admin**

The views listed above present the milestone activity information (such as completed by, completed date, etc.) as the activity is being completed within the application. These views can be linked to additional tables that store signatures and initials, which in turn allows users to display the correct signatures and initials dynamically.

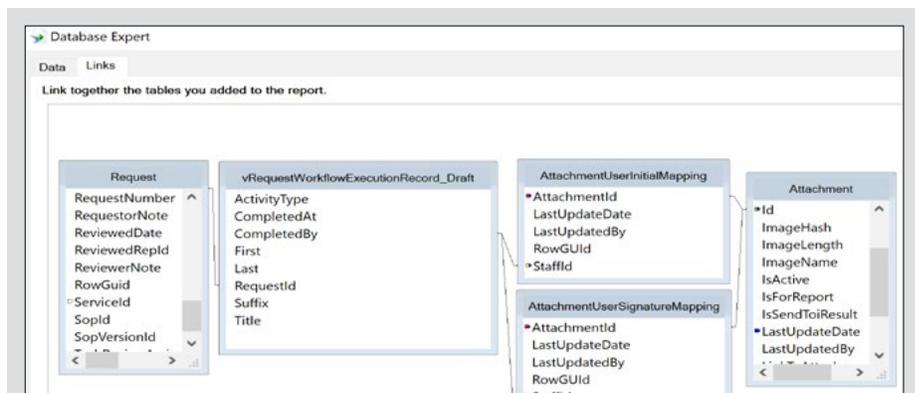
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Timing is Everything

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To the right is the Crystal Report linkage for Draft Complete signatures and initials using the LIMS-plus v5 database.

To display the signatures or initials, add the appropriate milestone view and link to *dbo.AttachmentUserInitialMapping* (to display initials) or *dbo.AttachmentUserSignatureMapping* (to display signatures). Link the mapping tables to *dbo.Attachment* and display *dbo.Attachment.FileByte* on the report.



LIMS-plus v5: Crystal Report Linkage for Draft Complete Signatures and Initials

The RequestWorkflowExecutionRecord views will be available in the next public release of LIMS-plus v5 and are also available by request through our Customer Care Team. 

Meet the Staff: Dale Founds, III



Dale Founds

IT Implementation
Support Specialist

[EMAIL](#)

JusticeTrax prides itself on its commitment to customer care, and team member Dale Founds, III exemplifies this commitment. As an IT Implementation Support Specialist at JusticeTrax, Dale is responsible for the majority of application installation and implementation tasks for customers, including on-site and remote services and training. Once a system is up and running, he supports his clients and deals with any issues that come up after the system goes “live.”

Originally from Texas, Dale has been with JusticeTrax for four years and previously attended the University of Advancing Technology in Arizona to pursue his interest in computer science. Dale especially enjoys working at JusticeTrax because of his co-workers’ diverse skill sets with experience in fields such as forensic science, police work, computer science, and information systems. His colleagues are an impressive group of individuals with whom he truly enjoys working.

Of his numerous past projects, Dale particularly enjoyed working with the Defense Forensic Science Center to implement their LIMS-plus® system. The project scope and network security requirements made implementation particularly challenging, but JusticeTrax was nonetheless able to deliver a system which met the customer’s needs.

Dale has always enjoyed technology. He relates that as a youngster, he loved to take things apart to see how they worked. As an adult, Dale enjoys cooking with an emphasis on different ethnic dishes and spending time in “the great outdoors” hiking or on the beach. In May, Dale moved near Charleston, South Carolina to be closer to his family.

Upcoming Trade Shows

DATES	TRADE SHOW	VENUE	LOCATION
February 15 - 17	American Academy of Forensic Sciences	Hyatt Regency	New Orleans, LA
April 11 - 13	Mississippi Division of the IAI	Thad Cochran Center	Hattiesburg, MS
April 18 - 20	North Carolina Division of the IAI	Shell Island Resort	Wrights Beach, NC
May 1 - 3	American Society of Crime Laboratory Directors	Sheraton Hotel	Dallas, TX
May 10 - 12	California Association of Criminalists	Hotel Kabuki	San Francisco, CA
May 14 - 19	Association of Firearms & Tool Mark Examiners	Grand Hyatt	Denver, CO

TELL US WHAT YOU THINK!

JusticeFacts is our periodic newsletter with news and information for your benefit.

To make each issue more interesting and valuable, we need your feedback. This feedback will enable us to tailor JusticeFacts to your information needs and interests. JusticeFacts is your newsletter, so help us make it a valuable resource that you'll look forward to receiving and reading, issue after issue.

By all means, send us your recommendations as to what content you want more of, but also can do without. Do you want more photos, screen captures, other graphics? What kind of information will help you in your work?

Please send your comments to:
david.epstein@justicetrax.com

Meanwhile, enjoy JusticeFacts, and we'll be on the lookout for your suggestions.

David Epstein, Business Development Manager

JusticeTrax in the Press

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Forensic Science Policy & Management: An International Journal



[Moving Toward New Requirements for the Admissibility of Evidence](#)



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