



Developing Agility

A Quarterly Newsletter for Unisys EAE and Agile Business Suite Customers

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Contents

- 1 How AB Suite Helps TDLR Tick
- 3 Engineering Corner: Getting to Know AB Suite Build and Change Analysis
- 5 Optimizing Your Application Environment with Unisys Services
- 7 CSC Analyst Spotlight: Ed Sharman
- 9 Field Test Report: AB Suite 4.0
- 10 Info Center

How AB Suite Helps TDLR Tick

By Glen Bridge, Jr., Director of Information Systems Development, Texas Department of Licensing and Regulation

The Texas Department of Licensing and Regulation (TDLR) is the umbrella licensing and regulatory agency for the state of Texas in the USA. We are responsible for the regulation of a wide variety of occupations and industries – everything from boxing and electricians to elevators and auctioneers.



As an organization, we administer some 30 statutes – including original licensing, renewals of licensure, tracking of pre-license and continuing education, and examination – which regulate over 200 license types.

Fulfilling these mission goals in a state the size of Texas requires the support of a powerful, intuitive, responsive technology infrastructure. And for that we turn to the Texas Umbrella Licensing Information Project, or TULIP. Currently developed using Unisys Agile Business Suite (AB Suite), the TULIP software manages over two million license records, as well as the associated education, examination, address, and financial information.

Since its inception, the overarching goal behind TULIP has been to allow all agency licensing functions to be transacted online, in real time, all through the system.

Part of this objective is achieved by direct, real-time Component Enabler interfaces that allow users to apply for a new license, renew an existing one, change an address, or perform myriad other processes online – and securely pay for their transactions with a credit card. Additionally, education providers can post curriculum completion information for pre-license and continuing education courses directly into the TULIP system via online interfaces tailored to their needs. This greatly lessens the time and manual effort required to handle and process mailed transactions. >>>



In addition, we provide a variety of applications to both internal and external customers, all of which use the TULIP database. Exposing our systems to the public in this way means we have essentially outsourced much of the data entry process to those who know the information best: the individuals requesting licenses. This allows them to access the system at their convenience, while enabling our team to stay focused on more strategic matters.

Furthering Our Goals with AB Suite

In order to advance our objective of running all licensing processes and related tasks through TULIP, we migrated the application from Enterprise Application Environment (EAE) to AB Suite in July of 2010.

We have a staff of 13 developers, and moving TULIP to AB Suite has really been a boon for our team. Because AB Suite Developer uses the Microsoft® Visual Studio® framework, and TULIP runs on a Microsoft Windows® platform, AB Suite appears in an environment that is very familiar to our developers – all of whom are well-versed in such tools as ASP .Net, Microsoft Visual Basic®, Microsoft Visual C#®, etc. This helps to increase the efficiency of our development efforts and makes it easier to add new members to the team.

This efficiency is also greatly improving the speed with which we respond to new directives from the state. TDLR has gained a positive reputation in the state legislature for our ability to implement legislation in a consistent, cost-effective, and timely manner, and AB Suite is helping us respond quickly to a continually changing regulatory climate.

For example, during a recent legislative session, TDLR was given 26 new license types to implement in six months. Because AB Suite takes a consistent approach and focuses on business rules, we had no difficulty accomplishing this aggressive goal within the required timeframe.

By automating systems quickly and efficiently, we are better able to focus staff resources on tasks where a human being is required. This has allowed

us to greatly increase our regulatory responsibilities without a proportional increase in staffing. By doing so, we've been able to considerably reduce the fees licensees pay. Today, 89% of original applications and 94.5% of renewals are filed online.

3.0 and Beyond

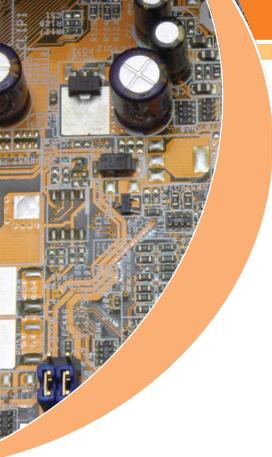
We recently moved to AB Suite release 3.0 and the increased speed makes a very efficient tool even more productive. This is noticeable in many areas, including runtime, development, and builds, but it's most apparent to us in how fast our end-of-day process has become. During end-of-day processing, we typically execute 491 reports and print roughly 5,600 correspondences and licenses. This used to take five hours to complete, but now finishes in just three.

The straightforward way in which parts of the TULIP system are exposed as Web Services makes the consuming processes platform-agnostic. The use of Web Services will make future upgrades of AB Suite simpler by eliminating the need to modify custom web interfaces and instead deploying standard Component Enabler software.

Given the success we've experienced with AB Suite 3.0, it was a natural choice for our team to participate in the AB Suite 4.0 field test. Throughout our time with the new software, we've found that there are some welcome new features in Developer and enhancements to the IDE and Debugger that will further increase productivity. Synchronizing the Class View with the Painter is one new feature that is very handy. Another is the ability to see additional element properties in the Painter. The Build and Change Analysis function has been further improved.

The enhancements we're seeing in the field test software for AB Suite 4.0 once again illustrate Unisys customer focus and commitment to the product. And for an organization that is as dependent on AB Suite as TDLR is, this is absolutely critical.

To learn more about TDLR, please [visit us online](#).



Engineering Corner: Getting to Know AB Suite Build and Change Analysis

By Rajesh Mudlapur, SME – Agile Business Suite Builder Core, and Todd McKeown, SME – Agile Business Suite Model, Unisys TCIS



The Agile Business Suite Build and Change Analysis function speeds the development and deployment process by creating time-saving partial builds.

To help you take full advantage of what the enhanced Build and Change Analysis function offers – and avoid unnecessarily long builds – it’s important to learn the basics of the process and understand how your actions impact what takes place during a build. And, it’s also important to learn some of the dos and don’ts of Build and Change Analysis.

What it Does

The Build and Change Analysis process can do a number of things. Below are some of its most important functions and capabilities:

- **Analyzes Model changes in real time:** All changes are captured the moment you make any modifications to the Model. And because changes are processed in the background, analysis happens without impacting the actual performance of your current development activity. This also improves the partial build by queuing the required Target Builders and Analyzers for execution.
- **Creates a more efficient partial build:** The partial build mechanism now reads and executes the Builders that have been queued by background processing. This enables the partial build to start faster and eliminates the need to execute the time-intensive “Model walk,” the process by which the elements of the modeled application are traversed.
- **Makes a change a change:** Modifying a modeled element – such as altering an attribute type or length, adding a new line, and saving logic – is a change that commits the operation to the Model database. This will trigger the Change Analysis mechanism to queue and re-run the Builders required to realize the change in the Runtime Application. One very important note: Reverting a change will not stop the Change Analysis mechanism – the Builders that were queued will still be run.
- **Provides build previews:** AB Suite allows you to preview the build without actually performing it. The preview indicates the percentage of the Model that will be built, lists out the elements that are being modified, and provides information about the associated Target Builders that will be run. It also helps you determine if a database reorganization is required. If it is, the build preview will provide information detailing how the physical database structure will be altered.
- **Logs dependencies:** During the build process, all of the elements used to run a Target Builder are traced, capturing information for each Target Builder specific to the Model being built. The traced elements are logged for use by the background Change Analysis function. Logging occurs in parallel to the Build Threads in Dependency Logging Threads. And, importantly, the build can only finish once the Build Threads and Dependency Logging Threads are complete.
- **Allows a single-element Build of Specs and Reports:** You can efficiently build a single Spec for Component Enabler and Debugger, or one Report for Debugger and Runtime, without building the entire build package, the grouping of items for building determined by the Deployable Folder properties. This is particularly helpful when you want to deploy a modified Spec or Report without building and deploying the entire build package. >>

- **Uses Report-only builds to analyze system changes:** When building a folder that only deploys Reports, Builder needs to ensure that there are no changes to the system that would prevent the Reports from working. To do this, it determines whether the top-level folder containing the system is up to date. This requires that the Change Analyzer Target Builders for the system build folder have been completed. Once they are, the message “Because of Report only build, analyzing changes for the top-level folder” will be logged in the log file.

Change Analysis Best Practices

Now that you know the basics, it’s important to keep the following in mind as you put the Build and Change Analysis process to work:

- **Do not toggle the deployment folder properties:** The deployment folder and its associated properties are the key for every build package unit, meaning that each folder with the deployable configuration property set to “true” is a separate build package within AB Suite. So if there are multiple nested folders in the Model that are deployable, and a recursive build is done – i.e., the Folder Only Build menu is not selected – a single build operation will actually create several build packages in parallel. It will only go through the build phases once, but will internally track the elements used for each Target Builder of each build package separately.

Caution should be exercised any time you toggle the deployment folder properties, as it will create a new build package the first time the build is performed, and will therefore constitute a full folder build.

- **Keep an eye on your Dependency Logging Thread values:** To optimize performance in your environment, you can tune the number of threads used for logging purposes by altering specific dependency logger settings (Note that all Dependency Logging Thread counts are separate to the number of Build Threads):
 - The “Number of Dependency Threads during the generate phase” setting will determine the number of threads used early in the build, when many Builder threads are typically allocated to generating files. This value can be set to zero in order to begin dependency logging once Builder has less to do on the client side. However, this will mean that more memory is required to keep all of the dependency information until it is logged.
 - The “Number of Dependency Threads after the generate phase” setting will determine the number of threads used later in the build, when Builder is doing less work on the client side. This value must be greater than or equal to what you chose in the “Number of Dependency Threads during the generate phase” setting.

If you’d like to learn more about the Build and Change Analysis process, please read our white paper, [“Change Analysis Improvements and Best Practices.”](#)

Optimizing Your Application Environment with Unisys Services

By Isaac Levy, Global Manager, ClearPath Services Solutions



As I meet with Unisys customers, I'm consistently impressed by the amount of time, energy, and resources they've invested in their EAE and Agile Business Suite applications. It shows us just how critically important these applications are to your day-to-day operations, and how much of a differentiator they can be.

Due to the unique features of EAE and AB Suite, developers using these tools have long been able to keep their applications aligned with specific business requirements. But resource limitations can sometimes make it challenging to take advantage of all of the new capabilities in EAE and AB Suite or learn from great implementations other EAE and AB Suite users have brought into production.

That's why we've updated the [ClearPath Services](#) portfolio to include offerings designed to help you effectively modernize, manage, and extend your application environment: the ClearPath Appraisal Service, ClearPath Application Modernization Services, and ClearPath Application Outsourcing Services.

Available for AB Suite users on both ClearPath MCP and Windows platforms, these services will help you become better positioned to align development priorities with business needs, accelerate time to market, and drive savings through reductions to labor, licensing, and maintenance costs.

ClearPath Appraisal Service

The ClearPath Appraisal Service helps you understand the present state of your application environment by measuring its maturity across two dimensions:

- **Automation:** Examines how successfully your applications eliminate manual effort – from little

to no automation to a “lights out” data center that can run without any human intervention.

- **Integration:** Uses a Service-Oriented Architecture (SOA) maturity model as a benchmark to analyze how well your applications interoperate – from minimal integration to full SOA lifecycle consistency and optimization.

Once you've determined where you stand, it's much easier to decide where you'd like to go – and what it will take to get there. Integration is a topic of particular focus in today's interconnected world – and an area where EAE and AB Suite have much to offer. For example, products like Client Tools and the [ClearPath ePortal for MCP](#) specialty partition have enabled EAE and AB Suite users to implement integration solutions that benefit their organizations.

Application Modernization Services

ClearPath Application Modernization Services help you protect and preserve the intellectual assets embedded in your applications, and enable them to participate in a SOA. In this way, the Application Modernization Services allow you to exploit newer technologies while continuing to leverage your EAE and AB Suite investments for years to come.

The ClearPath Application Modernization Services are built on Advisory and Transformation Service components, each of which features several distinct offerings. >>

Advisory Services:

- **ClearPath Application Advisory Services:** Help you assess and align ClearPath application initiatives with key business priorities and IT best practices.
- **Business Knowledge Discovery:** Documents the intellectual capital embedded in your applications.
- **Strategic Planning and Modernization Roadmap:** Develops ROI-driven plans for your modernization project.

Transformation Services:

- **Application Optimization:** Addresses short-term cost and operational efficiency needs.
- **Application Re-Architecting:** Considers the long-term business agility improvements and process enhancements, such as introducing Scrum into your development practice, of a modernization project.
- **ClearPath Modernization & Integration:** Leverages web services, mobile enablement, and/or SOA techniques and technologies to modernize and integrate your applications.
- **SOA Design & Implementation:** Migrates existing application functionality into a collection of SOA-based applications.

Application Outsourcing Services

ClearPath Application Outsourcing Services deliver operational management of the ClearPath applications you've written in EAE and AB Suite, as well as COBOL, ALGOL, Fortran, and Business Information Server (BIS) – and help you implement new application functionality and integrations. To learn more about how to augment your current resources, [take a look at an article from a previous issue of Developing Agility](#).

These services are just a small subset of what's available to EAE and AB Suite users. For example, we also offer services that can help companies running EAE on Windows, UNIX®, or Linux® migrate to AB Suite on ClearPath MCP or Windows platforms. And we also offer a balanced service portfolio that can help EAE on MCP users move to AB Suite on MCP.

To learn more about these or any other parts of our service portfolio, please contact your Unisys account executive or drop us an email at ABSuite@unisys.com.

CSC Analyst Spotlight: Ed Sharman

This article is part of a series showcasing the Unisys Customer Support Center (CSC) Analysts who support EAE and Agile Business Suite. Interested in seeing a support analyst featured? Send us your nomination: ABSuite@unisys.com.



Ed Sharman's first introduction to Unisys technology happened in 1974, when he was working in Chicago as a computer operator on a Burroughs DC 1100 system. In 1982, Ed formally joined Unisys to provide software support for B1000 systems. Two years later, he moved from snowy Chicago to balmy Atlanta to take a position in the CSC organization.

A father of two daughters – one of whom recently earned a master's degree in IT – Ed spends his spare time walking his dogs and honing his skills on the bowling lanes.

Developing *Agility* recently talked with Ed about his role as a CSC Analyst, his process for helping customers resolve support issues, and what he likes best about his job.

Developing Agility: What are your current job responsibilities in the CSC?

Ed Sharman: I've supported EAE and AB Suite since 1989. I usually handle issues related to EAE Developer, Component Enabler, and EAE and AB Suite on MCP, but I also support customers using EAE and AB Suite on Windows from time to time.

DA: Customers are curious to know how CSC Analysts go about tackling the problems they report. What initial actions do you take upon receiving a support call?

ES: All incoming support calls are stored in a tracking database and associated with a specific queue based on the product in the call. Analysts monitor these queues and take the calls based on their areas of expertise.

Once I take a call, I review it and decide if I need to take any preliminary action before working on it, such as getting in touch with the customer.

In some instances, arriving at a resolution is as simple as having a conversation with the

customer. When I'm asked a "how do I accomplish something" type question, I'll often brainstorm different approaches with the customer to help them see things from a unique angle. It's amazing how much I learn working with EAE and AB Suite users this way, too.

At other times, my initial step might be to try to reproduce the problem and identify its root cause using a simple application like SAMPLE. Or, if there are specific error messages involved, I'll search through our problem-solution database and look for reports detailing how other analysts have resolved that error. That often helps me focus my analysis on a specific section of the product.

And if the issue is related to an area I know one of my colleagues has particular expertise in, I'll reach out to them for assistance.

DA: What steps do you take if the issue can't be resolved using these initial tactics?

ES: I may ask the customer for their Model file and use that to reproduce the problem. I'll look for workarounds and logic changes, or try to identify the piece of code that is causing the issue and comment out sections to see if that leads to a fix.

I can also establish a secure, remote connection with the customer's PC to view the problem in their environment. Seeing the issue under real-world conditions can provide incredibly useful insights and lead to a faster resolution. >>

Another technique I often employ is to utilize the EAE and AB Suite test environments we've established on virtual servers in the Unisys cloud. This can be very useful, as it gives us another way to probe into the problems customers report. In fact, prior to the release of AB Suite 3.0, I requisitioned three Windows 2008 R2 servers and created a distributed AB Suite development and runtime environment. I also utilize a cloud-based MCP system to aid in my testing of customer issues.

“Ed has always been my first responder – he’s quick to understand my problems and is relentless until he finds a solution for me. He makes my job so much easier.”

– Ina Boeke, Assistant Vice President and Programming Manager, United Fire Group

DA: How do you document the problem once it's been resolved?

ES: If I think it might be useful to others, I will update the description of the issue and the steps required to resolve it and flag it for entry into the problem-solution database. This way, the fix will be completely documented and stored in a location where it's available to all other CSC Analysts, which should help to accelerate the resolution of similar issues in the future.

DA: If there was one thing that customers could do to make your response more effective and efficient, what would it be?

ES: While some customers may think calling the 800 number is the best first step, I recommend submitting the support request through our web portal. This method captures more detailed information about the issue. And, it will give the entire global team the elements necessary to investigate the problem, collaborate with one another around the clock, and work toward a quick fix. It also makes it easier to provide the information to engineering when a problem requires their help to resolve.

DA: What do you like best about being a CSC Analyst? What gives you the most satisfaction?

ES: Obviously, being a support analyst, I get my greatest satisfaction from helping customers get past their problems. And as anyone who's ever worked with EAE or AB Suite can tell you, it's impossible to know everything, so I'm always happy when I learn something new. It's also been exciting to watch AB Suite evolve since my early days. The product really takes things to a new level.

On a more personal note, I'll be celebrating my 30th anniversary in the CSC next year, and I'm very proud of the friendships with customers and colleagues I've built over the last three decades.



Field Test Report: AB Suite 4.0

By Leanne Bates, Engineering Project Manager, Global Technology Center – Australia

The field test for Agile Business Suite 4.0 concluded on July 31, 2013. It provided a great opportunity to see the new release in action and allow customers and Unisys personnel alike to give it a thorough workout.



And because we employed the collaborative, less-formal structure first introduced in the AB Suite 3.0 field test, testers and engineers worked closely to put the software through its paces – reviewing all aspects of installation and generation, as well as all of the new features. To help testers get up and running quickly, we conducted (and recorded) two training webcasts and provided drafts of the documentation, as well as the draft 4.0 version of the student guide that will be delivered in the “Getting Started with AB Suite Developer” self-study course.

As with the AB Suite 3.0 field test, participants were given direct access to engineering personnel to address any installation-related problems, which helped us make changes that will ultimately result in a more automated, streamlined installation process. We’ve made some changes to installation in order to better support the Visual Studio 2012 environment, so allowing customers to spend a good amount of time testing the installation process was an extremely useful exercise.

For installation problems, as well as all other issues they discovered, testers submitted “specially marked” UCFs that the engineers reviewed each day. This allowed them to quickly pinpoint issues and develop a fix prior to finalizing the code.

Client Participation Enhances Testing

In addition to numerous Unisys field support personnel and software developers, including the team behind the Unisys Urbis core banking solution, four AB Suite customers participated in

the field test. This mix of participants allowed AB Suite 4.0 to be exposed to a wide variety of real-world conditions, which will ultimately translate to a better, more stable end product.

We’d like to thank everyone who participated in the AB Suite 4.0 field test. Your time and effort was instrumental in building a high-quality new release that will greatly improve developer productivity. We hope you’re as excited as we are for its release later in the year.

What Are Testers Saying About AB Suite 4.0?

“My overall feeling is that 4.0 is better than 3.0. At the same time, I would like to say that 3.0 is good, too. The bottom line is that AB Suite is getting better and better with every new release.”

– Elmars Strods, Senior Systems Analyst and AB Suite Instructor, Baltic Technology Group

“Apart from the installation issues (some self-inflicted), the AB Suite 4.0 field test software seems stable and working.”

– Mitcho Iankov, Senior Software Developer, Department of Economic Development – Information Systems Division, Isle of Man Government



Info Center

New additions to our libraries of How To documents, white papers, and other useful information include:

- **How To:** Secure Model with Access Control **(NEW)**
- **How To:** Use Registry Keys with Windows Runtime **(updated)**
- **White Paper:** Using Public Model File **(NEW)**

To view these and other resources, simply go to public.support.unisys.com and choose “Documentation” in the “Public Information” box located on the left-hand side of the screen. No special login is needed.

In addition to these resources, be sure to check out the following items:

- [Agile Business Suite Course Catalog](#)
- [Agile Business Suite Overview video](#)

And, we encourage you to sign up for our Customer Technical Bulletins (CTBs). This is the primary way Unisys Engineering communicates with customers about Interim Corrections (ICs), releases, and even product issues, so it’s a very important resource for all EAE and AB Suite users.

To receive CTBs, log in to the Unisys support site, select “Your User Profile,” click the “Register for alert/bulletin notifications” link, choose the products you’d like to be alerted about, and you’ll be good to go.

If you have any questions about EAE or AB Suite, or need help, advice, or consultation, don’t hesitate to send us an email at ABsuite@unisys.com.

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