RTPA™
Real-Time Program Audit™

Apparel Company Integrates In-house Code with Vendor Package, Quickly Fixes Known Errors, Implements Software into Production

Fishman & Tobin LLC (now owned by Li / Fung LTD), a family-owned business operating worldwide, began manufacturing fine children's apparel in 1914. Crafting and designing premier children's clothing for nearly a century, the IT system plays a vital role in getting their products to their customers in a timely and efficient fashion.

Integrating existing programs with new applications is a common challenge for long-established companies; enhancing pre-packaged software can be a thorny task. Often these large applications were created by multiple programmers over many years. The logic is frequently hard to follow, and there may be lots of calls to external programs at different levels. The challenge for a programmer is to understand the application before making changes and to ensure that these changes don't result in unwanted consequences. These two tedious, laborious stages are often where programmers spend the majority of their time.

Because of the difficulty and risk of enhancing existing software, companies often have backlogs of software-enhancement requests, resulting in large numbers of frustrated, unhappy customers. To add to the pressure, many IT departments are unable to make vendor- supplied software upgrades because of the difficulty in reintegrating prior enhancements.

Despite pressure to get the job done quickly, programmers must understand the existing program before attempting any modifications. This was the challenge facing Dan Goldstein, Southern Application Support Manager for Fishman & Tobin. He was tasked with taking an existing distribution system and migrating it into PkMS, Manhattan Associates' extended supply chain execution platform, bringing his functionality into MA's package.

> *"I could have spent days, weeks or months just looking at their flow, and there were hundreds of different conditions that branched out. After using RTPA,"* Dan explains, *"I was able to determine where in the logic I could exit their application and insert my program, and then return to their logic without destroying any of the integrity of their data.*

Dan's earliest attempts at integrating the two applications were not successful, due largely to the difficulty in interpreting the logic of the programs.

AT-A-GLANCE

Company:
Fishman & Tobin LLC

Industry:
Manufacturing/Apparel

Problems solved:
- Complexities of enhancing pre-packaged software
- Find and solve bugs, quickly
- Verifying changes with speed and efficiency
- Understand complex code without legacy knowledge

Results:
- Migrated existing distribution system into vendor-supplied package, quickly
- Solved known errors faster and more effectively, including in vendor package
- More confidence in verifying changes
- Understand complex calculations by seeing exactly how the program calculates its results

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Dan uses RTPA to audit labels, file I/O, external references, branches and conditional operations in order to get an immediate overview of the actual flow of an unfamiliar program. This allowed Dan to eliminate time spent reviewing unnecessary sections of the source listing. By seeing the actual flow, without the need to guess which conditions or branches are followed in the execution, he was able to save time and maximize his efficiency.

In another instance, RTPA helped Dan with a problem of tracking down a faulty result in a vendor-supplied package after he made an enhancement to it.

Dan also used RTPA to audit arithmetic operations in order to understand complex calculations. Following the actual execution of the operations and seeing all of the intermediate values of the variables in the operations eliminates guessing about how a program calculates its results, and gave him greater confidence in verifying changes. He was also able to audit individual variables to identify where key variables are changed by the program.

This is much faster than working with breakpoints and stepping. He used the extra time left over for testing, reducing the likelihood of unintended consequences when modifying programs.

Using the RTPA analytical tool, Dan was able to successfully enhance Fishman & Tobin's software, including the difficult task of integrating in house and vendor-supplied packages. With the faster, successful migration of their existing distribution system into the new package, and the ability to address known calculation and other errors, Fishman & Tobin was able to meet their customers' needs better, faster, and more efficiently.

> *"I thought the problem was with the code that I had written, because theirs was pure vanilla. I spent an entire day going over my logic and could not find a bug,"* Dan explained. *"By using RTPA, I was able to determine that it really wasn't the program that I had written, it was about six levels down in their application, which called about 35 different programs depending on different scenarios that you never would have been able to find by just reading logic."*
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> *"But by using RTPA and following the data flow, I actually found a problem caused by the pure vanilla program with a bug that only certain conditions exposed. I was able to fix their program and take the onus off the code that I had written."*

FIND OUT MORE

Visit www.realtimeprogramaudit.com or email info@harkinsaudit.com
for more information about how to get started with RTPA now.

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**Record and understand the real-time flow of your code.
See what executed. Know what happened.**