

Stitch-in-Time[®]

Airtight observation of iSeries data integrity



The high cost of data integrity problems

Data integrity problems cause enormous costs that tarnish just about every line on the P&L. If an accountant gathered all those costs in a single bucket, the value would probably trigger senior management alarm bells. Worse yet, the brightest analysts in the organization ... the people that should be working on projects to move the business forward ... they're the ones that usually end up looking for and fixing data accidents. That's an unseen opportunity cost.

If you would like to substantially reduce the cost of finding and rectifying data integrity problems, consider investing the time to learn about **Stitch-in-Time** software.

Not all data integrity problems are accidents

Without well-designed internal controls, clever/unprincipled individuals can be tempted to take advantage of a computer system. Companies subject to Sarbanes-Oxley (SOX) scrutiny, for example, have an excellent reason to identify security gaps that foster this kind of mischief.

Let's try an experiment: if a sharp external auditor challenged your accounts payable manager with this test, how would your company respond?

"Prove that no-one got into the Vendor Master file last Friday morning just before checks ran, changed a vendor name/address, and then restored the original data right after the check run."

If **Stitch-in-Time** had been operational on your system last Friday morning, then that auditor would receive a decisive, documented answer in minutes.

Praise from Stitch-in-Time customers

That robust internal control functionality has impressed enterprises who have SOX, HIPPA, 21 CFR part 11, GLBA, and other compliance issues. We have very happy customers, including some who have no government regulations to comply with. [Click here](#) to see recommendation letters.

The judges at Search400.com were impressed too; they recognized Stitch-in-Time with a "**Security Product of the Year**" award.

Stitch-in-Time software works for any physical file on any iSeries/i5 equipment.

Need better data integrity controls?

Business operations are particularly sensitive to the integrity of data in master files; even small accidental changes to things like bills of material, engineering standards, transaction definitions, planning parameters, and customer masters end up breeding a proliferation of costly business errors. Here's one hypothetical illustration



The first signs of a food product quality problem surface in Texas, Minnesota, and Arkansas. The number of retail outlets involved has been growing over the last 36 hours. Investigation determines that the formula composition of an ingredient was changed in the Bill of Material master file without proper authorization. Without the functionality in our Stitch-in-Time software, there's no way to figure out exactly when that change was executed ...so ...it's very difficult to determine which finished goods production lots are candidates for a product recall.

Some additional illustrations of unconstructive master file data changes can be found [here](#).

Overview: how Stitch-in-Time can help

Stitch-in-Time software provides a tool to observe and analyze details about data changes in critical databases, without any changes to your programs or files.

The recorded details include the pre-change and post-change contents of fields, information that identifies the user executing the change, the precise date and time the change was performed, and the program he/she used.

Once Stitch-in-Time is installed, your company can compare actual database changes with authorized changes. You would also be empowered to investigate future data change accidents, learn root causes, and then design more effective internal control procedures to prevent recurrences.

The software gives management the ability to select specific computer files for observation, a selection that can be revised from time to time. Observation can be defined at the field-by-field level. The software also provides a user-friendly way to configure report information from the recorded observations according to user-defined selection criteria and formats.

A practical application: the customer master file

Let's presume that a Stitch-in-Time user wants to monitor the Customer Master file to trace changes to customer credit limits. Here are the three steps to apply the product's functionality:

a. Add the Customer Master file to the list of observed files

Set the dates for the observation time frame. During the selected observation time frame, Stitch-in-Time would then build record images of all changes to the Customer Master file in a separate database file.

b. Create an Audit Definition, selecting the Customer Master file for auditing

This could be done after some time has passed. The Audit Definition would specify the Credit Limit field in the Customer Master for investigation and Customer Name and Customer Number fields for inclusion on the report. You may also enter any number of selection or omission criteria to further refine your report definition. (For example, perhaps you only need to review those Customers in a given geographic region).

A practical application, *continued* ...

c. Instruct Stitch-in-Time to create the report defined by the Audit Definition.

The collection of observed data for the customer master file would be reviewed for content changes in the Credit Limit value and, if a change is found in the pre-change and post-change value of the Credit Limit field, then those pre/post values are printed together with the associated Customer Name and Customer Number, the precise date and time the change occurred, the ID of the user who executed the change, the name of the job/program the user employed to perform the change, and the record number of the record changed in the file.



Deeper details about how Stitch-in-Time software works

Please note that Stitch-in-Time does not employ database triggers. Trigger strategies don't rise to the standard of professional, fail-safe audit protection; they can be turned on and off without leaving an evidence trail. Instead, the product employs journaling to collect data in a very creative way that fully puts to rest the typical complaints about journal receivers chewing up too much hard-drive.

If you have a technical background, please [click here](#) to see a technical abstract.

A suggested internal control regimen

The five high level internal control steps below suggest an approach to improve the integrity of a data change management process. The frequency of data change integrity accidents can be reduced and the consequences of those accidents can be diminished by implementing this regimen.

Are these five steps practiced at your enterprise?

1. **Compliance with a formal Data Change Management process** designed to be in harmony with ERP/MRP II principles. Follow management-approved processes for changing other types of crucial corporate data.
2. **Consolidation of responsibility and accountability.** For any given type of data, one organizational unit should be vested with both the ultimate authority for authorizing a change and the responsibility for executing the database change with precision. That single unit can then be held accountable for post-change problems.
3. **Comprehensive documentation of change authorizations.** This is the beginning point for step number four: post-change accuracy audits.
4. **Post-change accuracy audits** to ensure that approved changes were accurately executed in the corporate database. An organizational unit that does not have authority to approve or execute database changes should perform these audits.
5. **Post-accident investigations** to learn the root cause of unexpected data changes; findings are useful to undo the consequences of accidents and to provide the insight for continuously improving internal control procedures.

Stitch-in-Time provides functionality for steps four and five of the process.

It's also a powerful debugging tool

Over the years we've had an occasional call from one of our **NoExcuses HelpLine** customers telling us about a stubborn bug that they've been trying to diagnose for a long time with no success. Sometimes we've been given "fair warning" that the bug may not be solvable.

In cases like that we have employed Stitch-in-Time as a de-bugging tool. We ask our customer to authorize installation of a demo copy of Stitch-in-Time software in their test environment. We configure it to look at the pertinent databases, run a few samples of the problematic transaction, and then look at the chain of data changes the software has observed. Usually the findings point right at the "smoking gun." It makes our technical consultants look exceptionally competent.

The fourth paragraph of this **Saint-Gobain Ceramics** recommendation letter for Stitch-in-Time testifies to that de-bugging benefit.

Speaking of a demo copy ...

The free demonstration version of Stitch-in-Time allows full observation and analysis of an unlimited number of data objects. You can download the demo, installation instructions, and User's Guide [here](#).

Questions ?

It would be a privilege to answer any questions about **Stitch-in-Time** software. Here's Unbeaten Path International's contact information:

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Send us an e-mail (click [here](#))



Unbeaten Path®

Sarbanes-Oxley information

Congress passed the Sarbanes-Oxley Act in reaction to the Enron and WorldCom internal control meltdowns.

More information about SOX is available [here](#).