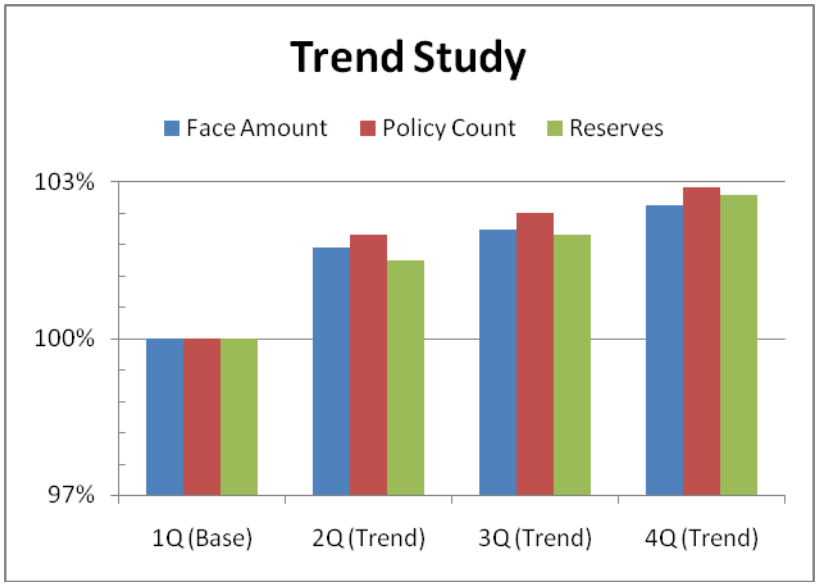
Summary Database System (SDS)

A Database Valuation Tool from

SALT Solutions



SALT SOLUTIONS
Software Actuaries with Long Term Solutions

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Executive Summary

For the Valuation Actuary - Introducing the Summary Database System (SDS). Summary Database System is a back-end database valuation tool that organizes data from valuation systems so it can be transferred to other systems (such as accounting). It cleans up inaccurate and non-standardized data. It also has the capacity to perform all of the mathematical functions actuaries use in their valuation process for STAT, GAAP, and tax as directed by the user.

Even though SDS is a database system that utilizes the power and speed of a database, no database experience is necessary to operate SDS. In fact, SDS has the ease of use of a spreadsheet but with a controlled environment and power of a database.

The user has two calculation options: Normal and Seriatim. The two calculation options perform the same calculations and provide the same aggregate result. The difference between the two methods is that the "Normal" method aggregates the results during the processing which reduces the processing time as well as the amount of data that is stored in the output database. The seriatim method does not perform any aggregation so all of the detail is preserved in the output. The user can choose the variables that are aggregated. Common variables include plan code, par/non par, and by line of business.

SDS supports all accounting methods, lines of business, and valuation systems. Statutory blue book and NY filing are automated. Because SDS is valuation basis independent, you will find that this will be a great tool for the Principle Based Approach (PBA) world.

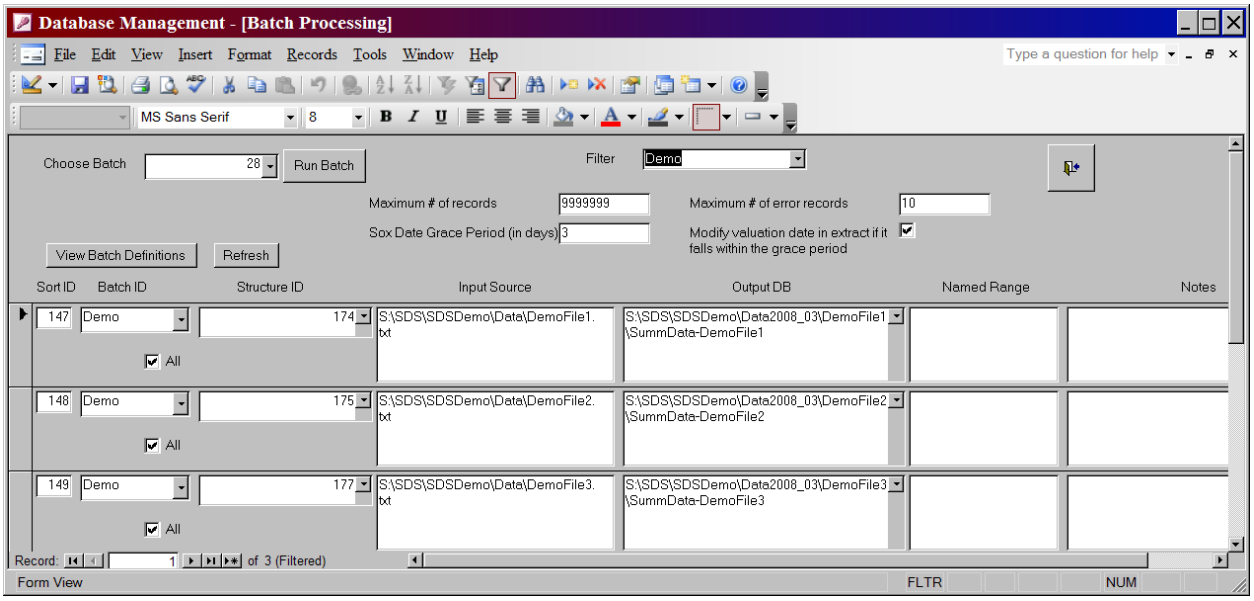
SDS automates valuation calculations often performed as back end adjustments to fix or enhance valuation systems. It is an open system with Excel-like calculation capabilities but with audits and controls designed to meet internal, auditing and SOX standards. Audit reports are provided from a coverage to a summarized level. SDS can be customized for your company.

Imagine a click button efficiency solution in a controlled environment to meet your valuation needs.

Data Import

SDS imports data from any electronic data source. It supports all valuation and administration systems. SDS also allows the user to provide manual input for calculation or value adjustment purposes. Unlike most spreadsheet systems, all of the user input is stored in one location and can easily be identified.

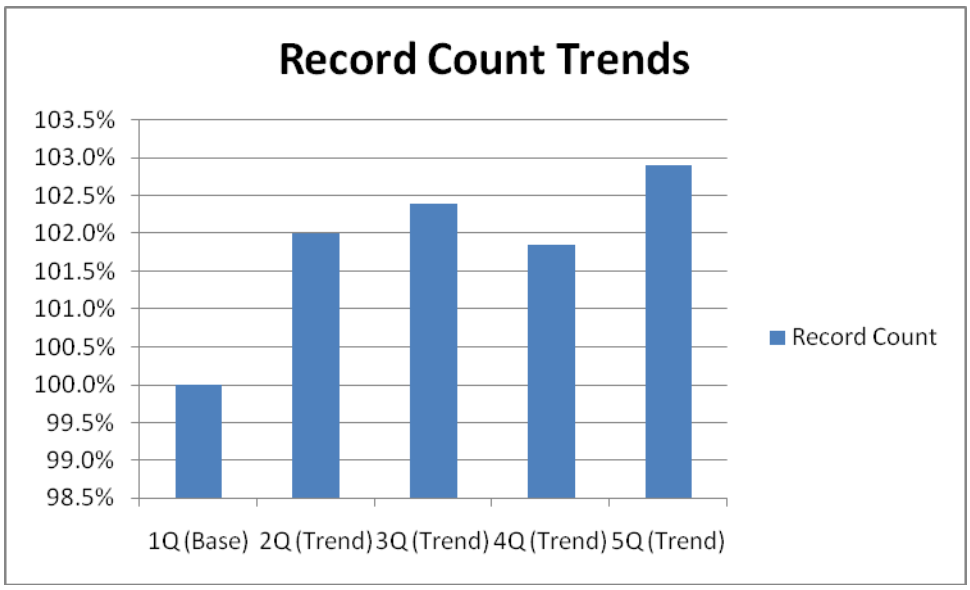
The electronic data import supports importing files one at a time or to group the files in batches to automate the process. Batch process can be established to import all of the electronic data in a single batch.



SDS supports importing text files in a variety of formats such as delimited (comma, tab etc.) and fixed width files. Even "report files" are supported if flat text files are not available. SDS supports the standard database files as input.

The data import specifications only need to be established once and won't need to change unless the structure of your file changes. A detail report is provided to ensure a successful import or identify records that did not get imported due to data error.

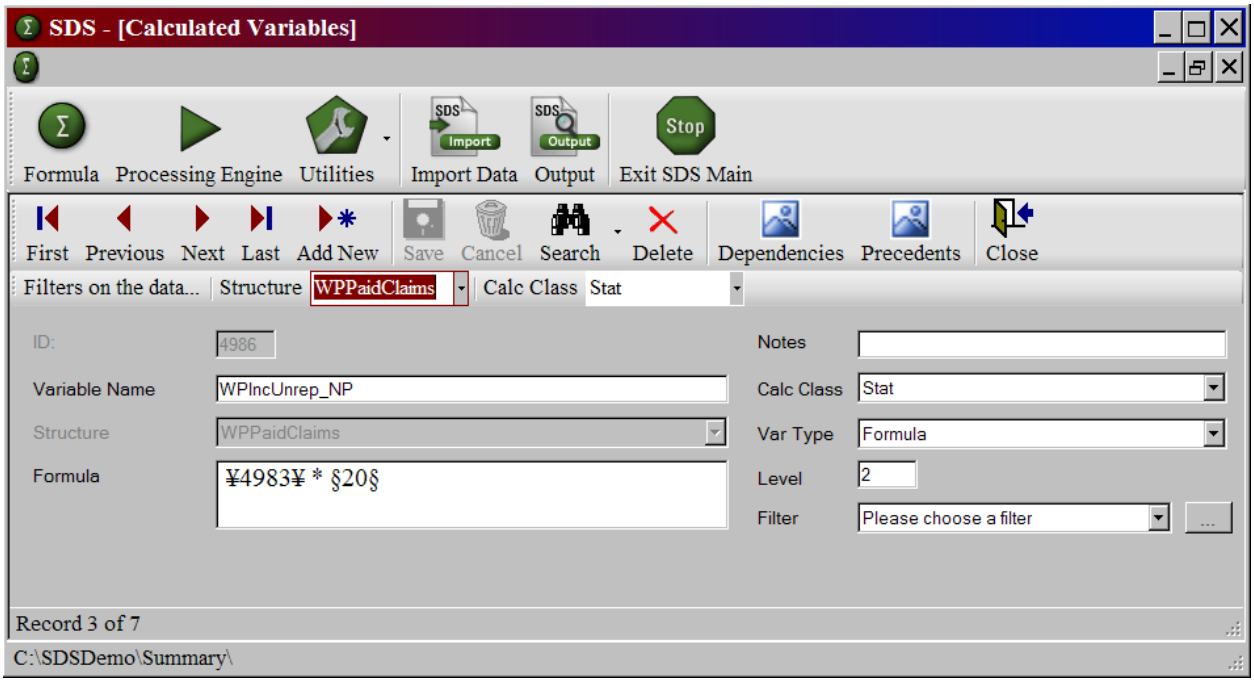
A trend chart is created to be able to quickly view how the current import compares to previous imports to add additional insight as to whether the input file is correct and it was imported correctly.



Calculations

SDS has the capacity to perform all of the mathematical functions actuaries use in their valuation process. Because it is a database system, it is designed to easily and efficiently provide filtering functions. At the heart of SDS, is the ability to "slice and dice" your data to view it in any format you desire. Common examples are Par vs. Non Par, First year vs. renewal, LOB categories etc. With the different audit reports, you can be assured that all of your values have been accounted for as you create different views of your results.

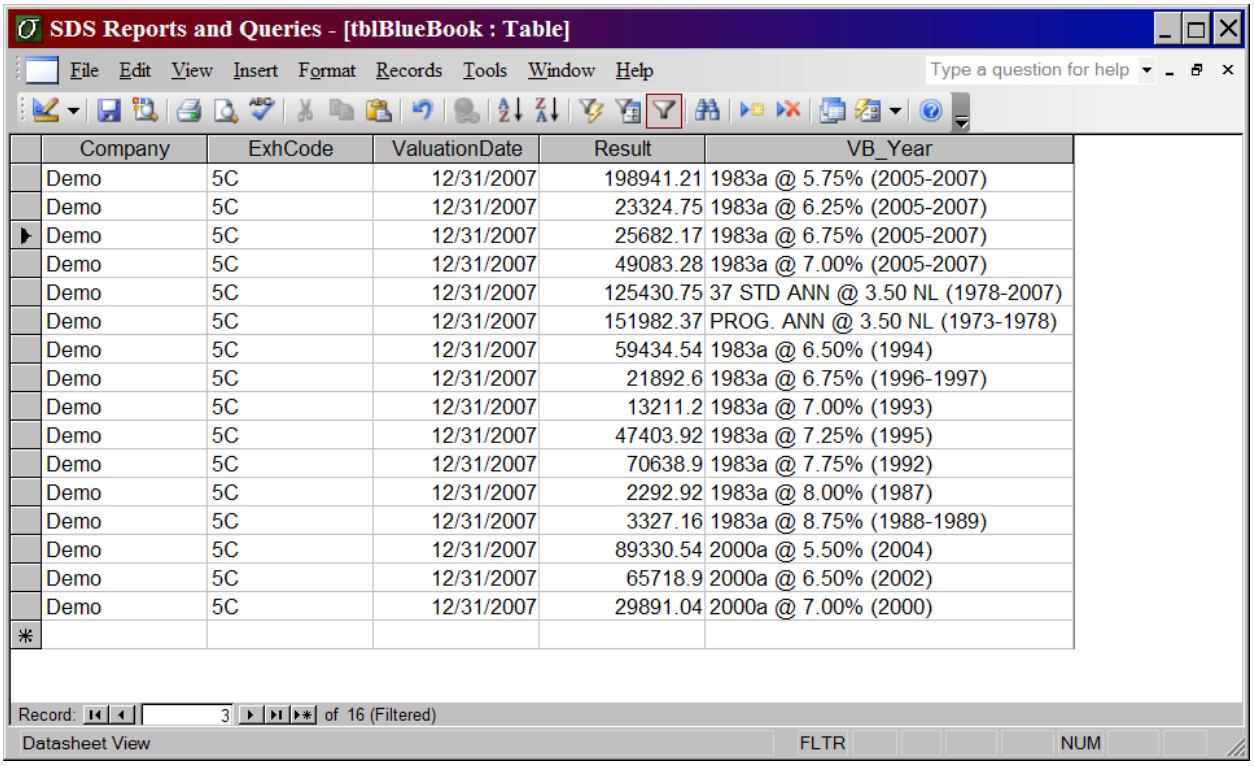
SDS is simply an "algebra warehouse" that allows users to create variables that are used for output. These variables can be functions of data that was imported on an electronic or manual basis as well as user defined constants. Separate filter definitions are provided that variables utilize to organize your data. The filtering functionality is easy to use yet very powerful. Because it is a database system, the filters only need to be created once and can be utilized throughout the entire system.



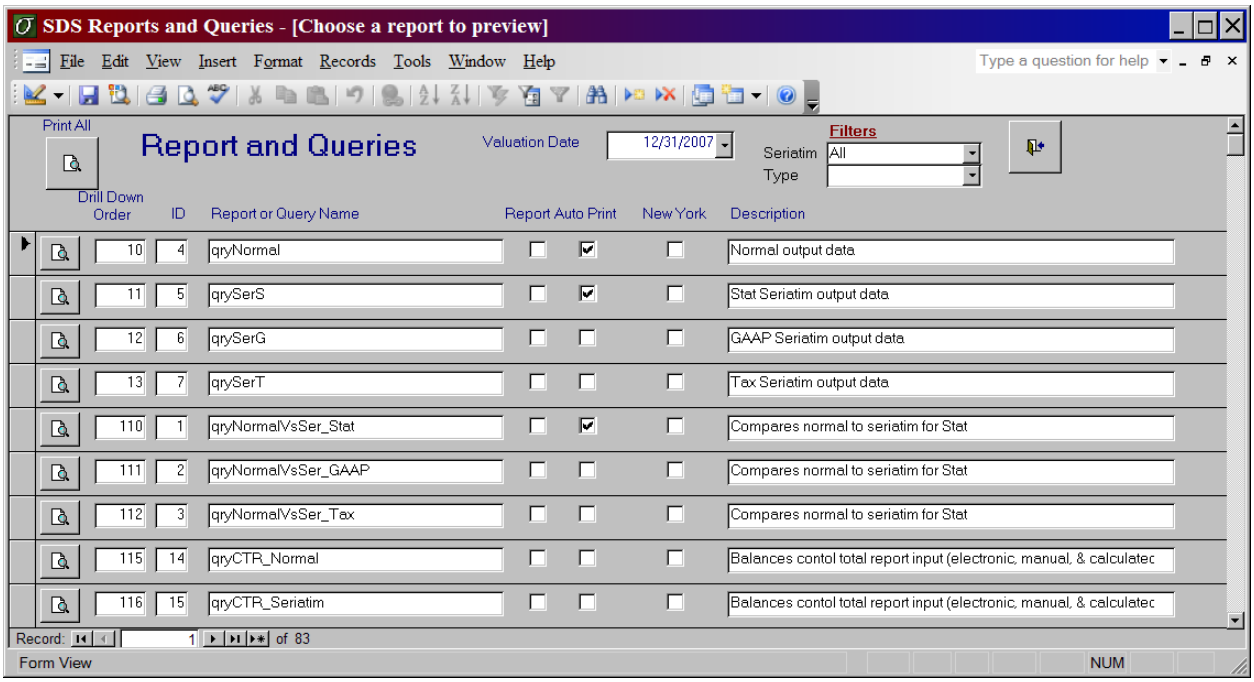
Reports and Output

Because all of the output data is crisply organized in a database, it is easy to generate user defined queries from the data. The data is "pivot table" friendly so the user can export the data to a spreadsheet to create pivot table views that give actuaries a high degree of comfort.

SDS has predefined queries that are common to actuaries. For example, the user can view the data in a "blue book" ready format that identifies the valuation basis and available issue years for the group of policies.



Do you have New York filing requirements? The combination of the SDS seriatim processing and the SDS predefined New York filing reports will result in SDS overcoming your New York filing challenges.



Variable Audit Report (VAR)

One of the most powerful features of SDS is the Variable Audit Report. This report is very popular with Company internal auditors, public accounting auditors, and state insurance auditors. The Variable Audit Report has a top-down method for displaying the results. The most summarized results are at the top. As you progress further down the report, you view more detail calculations until at the end you reach the data input.

Variables Created - Step 5

Structure	Calc Class	Acct	Acct Line	Report Line	LOB	Par NP	Rein	Var ID	Direct To Rein	Exh Code	Value
WPPaidClaims	GAAP	SAMPLE	SAMPLE	SAMPLE	Traditional Life	Non Participating	*	4986	False		17,500.00
WPPaidClaims	GAAP	SAMPLE	SAMPLE	SAMPLE	Traditional Life	Participating	*	4987	False		7,350.00
WPPaidClaims	Stat	SAMPLE	SAMPLE	SAMPLE	Traditional Life	Non Participating	*	4986	False		17,500.00
WPPaidClaims	Stat	SAMPLE	SAMPLE	SAMPLE	Traditional Life	Participating	*	4987	False		7,350.00
WPPaidClaims	Tax	SAMPLE	SAMPLE	SAMPLE	Traditional Life	Non Participating	*	5286	False		17,492.20
WPPaidClaims	Tax	SAMPLE	SAMPLE	SAMPLE	Traditional Life	Participating	*	4987	False		7,350.00

Variable: IncUnrep_NP (ID 4986) - Step 3 and 4 calculations

Formula with variable names:

IncUnrep_NP = (AccountValue_NP * *Factor - WP Paid Claims*) **

AccountValue_NP = ((AccountValue)){FILTER NP}

AccountValue is input

Formula with internal ID numbers:

[4986] = ([4983] * *0.35*) **

[4983] = (([4939])){FILTER [826]}

[4939] is input

Formula with calculated values showing filters:

IncUnrep_NP = (50,000.00 * *0.35*) = 17,500.00 **

AccountValue_NP = ((**71,000.00**)){FILTER NP} = 50,000.00

AccountValue = 71,000.00 (Step 2)
AccountValue = 71,000.00 (Step 1 Manual)

** *Aggregate formulae might not produce equivalent results to those that were obtained on a seriatim level calculation.*

At the top of each Variable Audit Report (Step 5 in the diagram below) is the summary of the values that are calculated for the file structures chosen. To view the details of this summary data, click on the row that you want to view detail data. You will be redirected to the detail component of this report. There are potentially three different views that you can choose to view. All three views provide equivalent formulae but display different methods for analysis purposes.

The first view is the "Formula with Variable names" view. This would be a view for the reviewing actuary. It shows the names of the variables in the formulae. It is a top-down view of the formulae without showing numeric detail. This view would allow the reviewing actuary to become comfortable that the formulae within SDS are as expected.

The second view is the "Formula with Internal ID Number" view. This view would be used by a system administrator that wants to make a change in the system. Since SDS uses ID's rather than names to store the variables, it is necessary to know the variable ID's in order to make a change.

The third view is the "Formula with calculated values showing filters" view. This view shows the aggregated numeric result from the formulae and would be used by a preparing actuary or an auditor. This would allow the user to trace the calculations for a given output item all the way to the input. Unlike the other two views, actual summarized numeric values are provided.

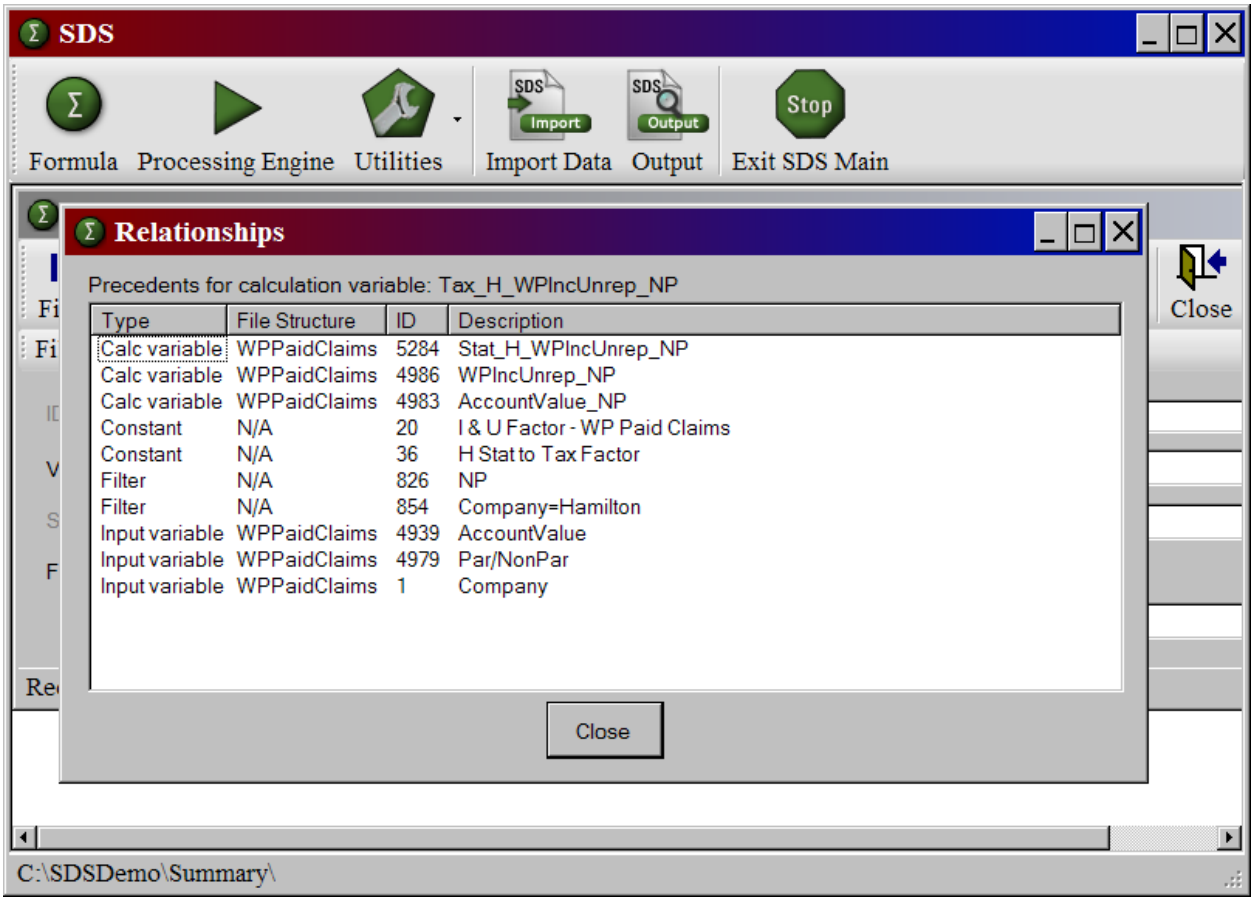
Because SDS is an "open" system, it is important to note that the user has the ability to change SDS formulae in a similar manner as a user would change a formula in a spreadsheet. Unlike a lot of systems that have the formula documentation as a static document that must be modified each time the formulae are modified, SDS dynamically creates this report each time it is processed. Thus, the formula documentation for SDS will show all changes to the system.

The VAR serves as valuable documentation to record historical versions of SDS output. For example, by saving this report each quarter, you will have documentation of the formulae SDS used to process for that given quarter. Assume that the SDS trend report shows that the current quarterly results did not trend as expected for a given line item. You could review the VAR for the previous quarters to answer such questions as whether there was a formula change from a previous quarter, whether there was an unexpected change in the input etc.

The VAR has coordinated color coding to make it easier to trace variables when displaying the formulae.

Analytic Tools

SDS provides a rich selection of analytic tools to ensure that you have complete insight into the system design and functionality. Similar to the Excel Formula audit functions, SDS provides "Dependent" and "Precedent" functionality that can be used to quickly trace how input variables, calculated variables, and output definitions are defined and used in the system.



For example, if you have an input field named “PlanCode”, you can easily identify all of the (Dependent) variables and report definitions that use that field. Likewise, if you have an output definition such as Traditional Life, Non Par – you can quickly identify all of the input and calculated (precedent) variables used to generate that output value.

Summary

SALT Solutions’ Summary Database System (SDS) can assist the Chief and Valuation Actuary to simplify and automate the processing of valuation data as the increased frequency, detail, and flexibility for such information is demanded by Company management. With new projects on the horizon, (e.g. Principle Based Reserving) actuarial resources will be stretched. Many companies have already chosen SALT Solutions to reduce their internal valuation workflow.

Why not take a few minutes and call SALT Solutions today? A comprehensive overview of how SDS can help your Company will be done by SALT Solutions staff. Call SALT Solutions today. (1-515-252-6064).