redRover
SOFTWARE

Audit User Guide

Contents

Preface

About this guide

This chapter provides an overview of this user guide and provides links to other resources you might find helpful in using Audit.

- "How this guide is organized" on page iv
- "Conventions" on page iv
- "Contacting Support" on page iv

How this guide is organized

This guide is organized into the following chapters:

- **Chapter 1 - Installation and Setup** - Provides installation instructions and an introduction to the Audit interface.

- **Chapter 2 - Sample Audit Work Flows** - Provides an overview of best practices in using Audit in different situations.

- **Chapter 3 - Using Audit** - Overview of Audit features and functions, including instructions for performing a spreadsheet audit.

- **Appendix A - Tips & Tricks** - Includes tips for using Audit more effectively.

- **Glossary** - Definitions of common terms used throughout this guide.

Conventions

This guide uses the following formatting conventions.

Format	Description
Bold	Represents buttons, tab labels, and menu selections.
| (pipe)	Separates multiple selections. For example, **Audit| Options**.

Contacting Support

If you have questions about our products or our company please contact sales@redroversoft-ware.com. To find answers to the most common issues, visit our online User Forum at www.redroversoftware.com.

Installation

Installation & Setup

System Requirements

Audit is a client-based program for use on a personal computer. To install Audit your system must meet the following minimum requirements:

- Microsoft Office Excel® 2003 SP2

- Microsoft Windows® XP SP2

- 1.8 GHz CPU

- 512 MB RAM

Installing Audit

To install Audit you must have administrative privileges on your personal computer. If you have a limited access user account, an administrator will need to install Audit for you. Audit is available only from within Microsoft Excel.

To install Audit:

1. Close all Microsoft Office Programs.

2. Insert the CD or download the file containing the Audit program.

3. In Windows Explorer, browse the CD contents, then double-click the **Audit Setup.exe** icon.

    The License Agreement screen appears.

4. Select **I Agree**, then click **Next**.

5. Specify a destination for the installation files, or click **Next** to accept the default.

Note: The Audit program requires a small amount of disk space. However, if you are unsure whether your computer has enough disk space to accommodate the program, click **Disk Cost.**

6. Click **Next**, to confirm and begin Audit installation.

7. Follow prompts to complete installation.

8. Launch Microsoft Excel.

Note: Before using Audit, you will need to disable the error checking feature in Excel. See "Disabling Error Checking in Excel" for instructions.

The Audit toolbar appears on the far right side of the Excel window and the Audit drop down menu appears on the Excel menu bar. Audit is only accessible from within Microsoft Excel.

Audit Buttons and Controls

Audit incorporates several visible features into Excel including the Audit Toolbar, the Audit Task Pane, and the Audit Drop Down menu.

Figure 1: Audit Toolbar

Audit Toolbar

Once Audit is installed the Audit toolbar appears on the far right side of the Excel window. Its functions are described below:

Audit: Toggles Audit on or off. Button is highlighted when program is running. Audit can be turned on or off at any time.

Open: Opens a previously saved Audit file. Audit files end in .i5a and are separate from Excel .xls files. You will receive a message if changes made to the workbook data or formulas since the audit file was last changed if those changes affect cells or regions that were already audited.

Verify: Compares the current audit file against the saved workbook to determine if changes were made since the last time the audit file was saved.

Save: Saves current Audit file. Saving the Audit file does not save the Excel workbook. The Excel Save command must be used to save the Excel workbook.

Task Pane: Toggles Audit Task Pane on or off at any time. Turning the Task Pane off does not turn Audit off.

Back: Returns you to the last cell visited.

Forward: Returns you to the cell last visited before using the Back button.

Options: Allows you to change options regarding Audit functions, such as whether comment bubbles appear when the cursor is over a cell.

Help: Opens the Audit support web page containing user forums, documentation, FAQ, and product update information.

Audit Task Pane

The Audit Task Pane appears on the right side of the Excel window next to the Audit Toolbar when Audit starts. The Task Pane provides information about the current audit as well as methods to instantly navigate within the workbook. The Task Pane can be toggled on or off at any time using the Task Pane button. Toggling the Task Pane off does not turn Audit off.

The subpanes in the Audit Task Pane are described below:
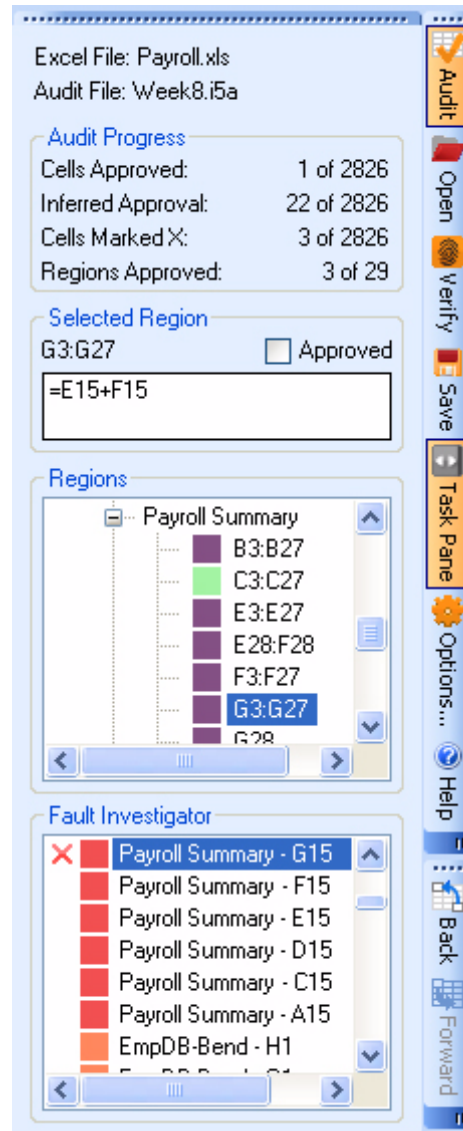
Figure 1: Task Pane

1. **Active Workbook:** Identifies the workbook in an active Audit session. Only one workbook in an instance may be audited at a time, although you may have multiple workbooks open.

2. **Audit Progress:** Summarizes progress of current audit activity.

3. **Selected Region:** Displays region information, including formula. Provides ability to approve a Region. Approving a Region only approves the formula and not the displayed cell values.

4. **Regions Navigator:** Provides a list of Regions within the workbook. Purple boxes indicate unapproved Regions. Green boxes indicate approved Regions. By clicking on a specific Region in the navigator you can jump to it automatically.

5. **Fault Investigator:** Provides a list of cells that are the likely origin of workbook errors. Cells more likely to be the source of errors are listed first. Click the cell to jump to its location in the workbook.

AUDIT DROP-DOWN MENU

The RedRover drop-down menu button appears on the Excel menu bar when Audit is installed. The menu contains less frequently used commands. The most frequently used command is the print function.
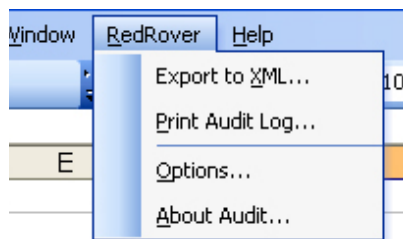

Figure 2: Audit drop-down menu

Export to XML: Exports current audit data to an XML file

Print Audit Log: Prints reference details about current workbook and audit data.

Options: Allows various Audit function options to be set, such as whether comment bubbles appear when the cursor is over a cell or region.

About Audit: Displays information about the installed version of Audit.

Customizing Audit

You can specify several options within Audit to customize the program from within the Options dialog. To access the dialog, click **Audit** on the Excel menu bar, then choose **Options**.
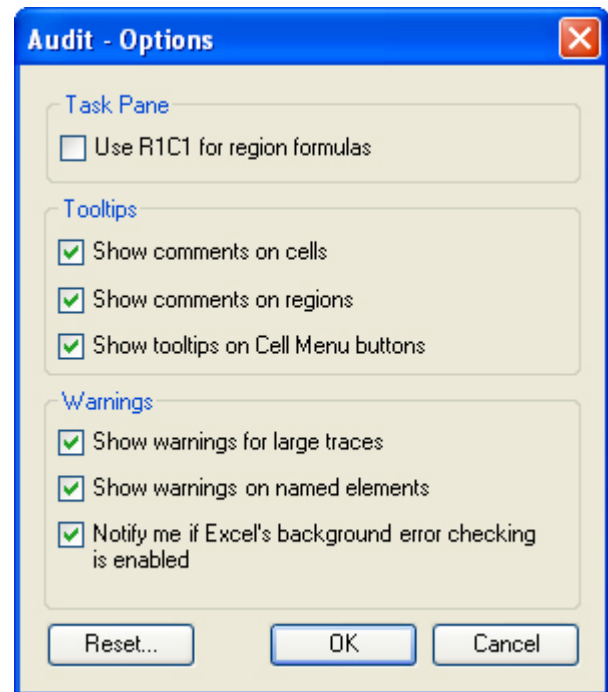

Figure 3: Customize dialog

TASK PANE

Excel internally records formulas in relative format known as R1C1 style. R1C1 locates cells based on their relative position in a workbook to cells that are referenced in formulas. By default, Excel uses A1C1 formula. You can specify that Audit use R1C1 for formulas instead. Click **RedRover|Options**, then select the "Use R1C1..." check box.

TOOLTIPS

By default, Audit displays comments and tooltips on cells and regions. You can turn off this from the Options dialog.

To turn off tool tips and comments:

1. Select **RedRover|Options**.

2. In the Tooltips area, select the check box next to the options you want to turn off.

   - Show Comments on Cells - Comments indicate whether the cell has been audited.

   - Show Comments on Regions - Comments indicate whether the region has been audited.

   - Show tooltips on mini menu buttons - Displays hints on toolbar buttons.

3. Click **Ok**.

WARNINGS

When Audit detects an event that is likely to impact your audit, such as changes to the spreadsheet you are auditing, it will display a warning so that you can make the proper adjustments. You can specify which of these warnings you want to see and which you do not.

To turn off warnings:

1. Select **RedRover|Options**.

2. In the Warnings area, select the check box next to the options you want to turn off.

   - Show warnings for large traces -

   - Show warnings on named elements -

   - Notify me if Excel's background error checking is enabled -

Getting Started

Sample Audit Work Flows

Sample Audit Work Flows

How you use Audit to complement your audit process depends on whether you are building a spreadsheet from scratch, editing a spreadsheet created by someone else, or auditing a template before rolling it out to a department.

The following sections provide an overview of the possible sequence of steps you might take to ensure the integrity of your spreadsheet values and calculations.

AUDIT CAPABILITIES

Audit capabilities can be used to enhance many different business processes. The full power of Audit is realized when deployed across an enterprise particularly in work environments where workbooks are shared. The following diagrams outline how Audit may be incorporated into an SOX Section 404 compliant process.

WORKFLOW 1: CREATING A WORKBOOK

The figure below provides an overview of how you would use Audit to identify and fix errors in your spreadsheet or workbook as it is being created. See Figure x below.

Process Overview
Workbook or Template Creation

Create Workbook or Template

Develop Workbook → Submit Workbook

Workbook construction assistance — i5Audit

Process Goal
- Prevent mistakes from being embedded in Workbook

Approve Workbook or Workbook Template

Test / Audit / Review Workbook → Publish Workbook and Audit files

Identify errors requiring correction — i5Audit

Generate Audit file — i5Audit

Process Goal
- Create Audit file evidencing approval and for future reference
- Company audit criteria (100% test, 100% audit, sample audit or review only) set according to criticality of workbook
- Use certified auditors

Central Storage

Controlled Storage System

Reports

Process Goal
- Error free workbooks
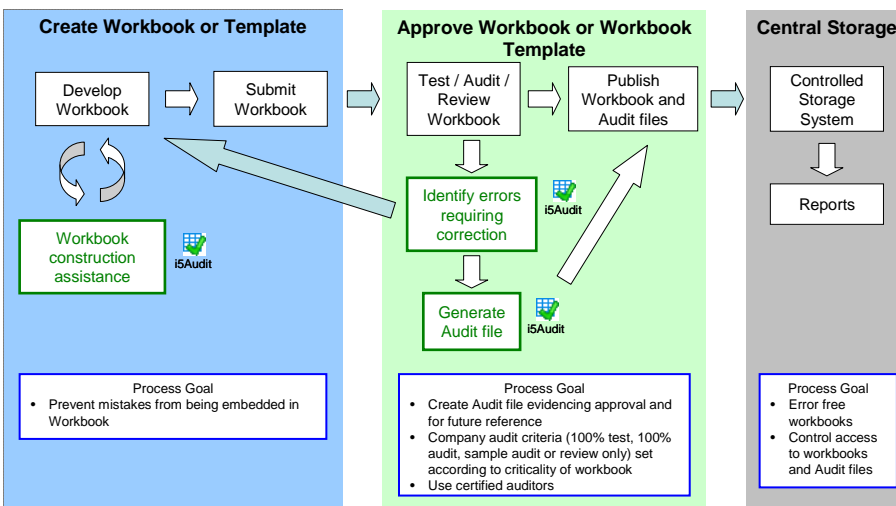- Control access to workbooks and Audit files

Figure 1: Workflow for creating a workbook

WORKFLOW 2: DECISION SUPPORT

The previous example dealt with the process for using Audit while creating a new spreadsheet. The figure below provides an example of the process to follow if you are providing input on an existing spreadsheet.

Process Overview
Decision Support

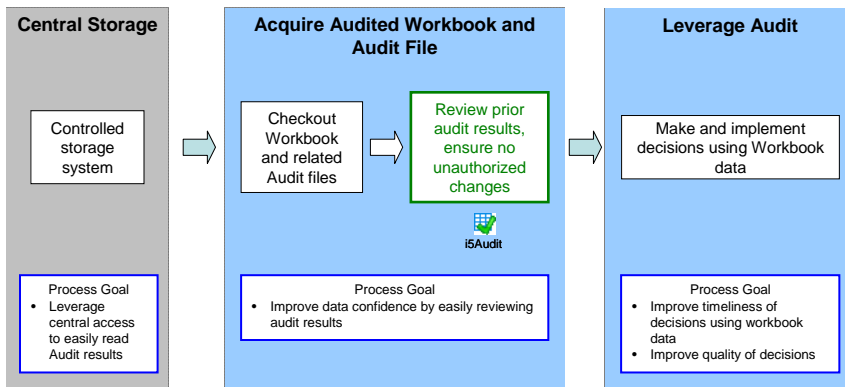| Central Storage	Acquire Audited Workbook and Audit File		Leverage Audit
Controlled storage system	Checkout Workbook and related Audit files	Review prior audit results, ensure no unauthorized changes **i5Audit**	Make and implement decisions using Workbook data
Process Goal • Leverage central access to easily read Audit results	Process Goal • Improve data confidence by easily reviewing audit results		Process Goal • Improve timeliness of decisions using workbook data • Improve quality of decisions

Figure 2: Workflow for Decision Support

WORKFLOW 3: CONTINUOUS PROCESS IMPROVEMENT

The following figure provides an overview of the process for using Audit to maintain the integrity of your spreadsheet documents on an on-going basis.

Process Overview
Continuous Process Improvement

Central Storage

Controlled storage system

Reports

Analyze reports for uncaptured errors **i5Audit**

Document error and change workbook creation and audit policies and procedures

Process Goal
• Review existing workbooks

Process Goal
• Prevent mistakes from being embedded in Workbook
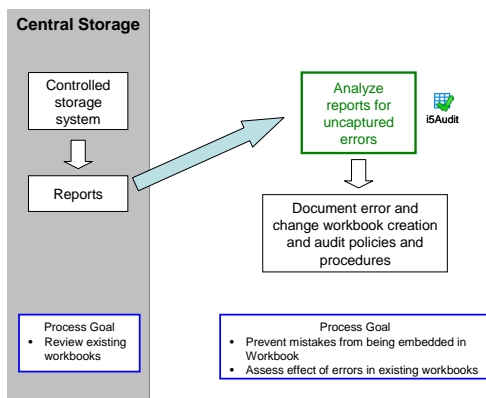• Assess effect of errors in existing workbooks

Figure 3: Workflow for Continuous Process Improvement

WORKFLOW 4: LEVERAGING EXISTING AUDIT

The figure below provides an overview of the process using an existing audit file (.i5a) as a basis for conducting audits on other workbooks.
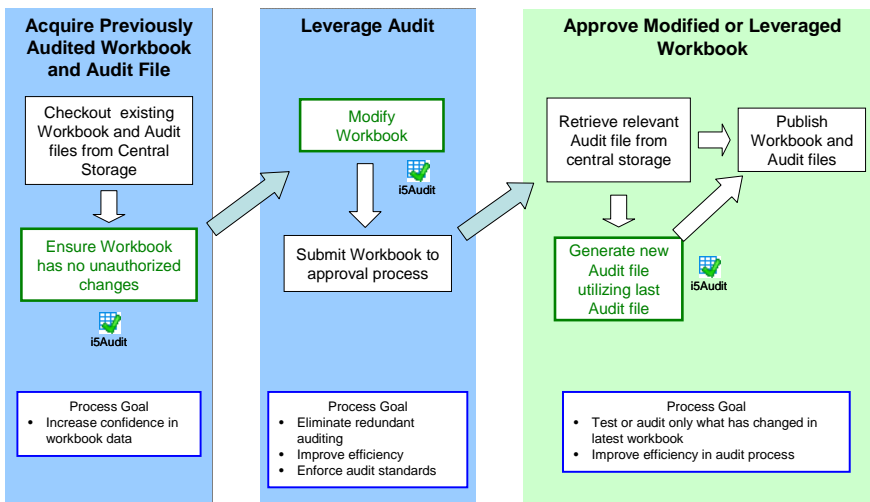
Process Overview
Leverage Existing Audit

Acquire Previously Audited Workbook and Audit File	Leverage Audit	Approve Modified or Leveraged Workbook
Checkout existing Workbook and Audit files from Central Storage	Modify Workbook — i5Audit	Retrieve relevant Audit file from central storage → Publish Workbook and Audit files
Ensure Workbook has no unauthorized changes — i5Audit	Submit Workbook to approval process	Generate new Audit file utilizing last Audit file — i5Audit
Process Goal • Increase confidence in workbook data	**Process Goal** • Eliminate redundant auditing • Improve efficiency • Enforce audit standards	**Process Goal** • Test or audit only what has changed in latest workbook • Improve efficiency in audit process

Figure 4: Workflow for Leveraging Existing Audits

Using Audit

Using Audit

Cell Auditing

The ability to audit individual cells is one of the primary features of Audit. A cell may be audited using the displayed value, as you would if the workbook was printed, or the formula. This feature is used in several different applications:

- Tracing errors of incorrect or questionable cells
- Performing spot checks on a workbook to analyze its overall quality
- Checking key cells within a workbook to build information confidence
- Auditing an entire workbook in order ensure its complete accuracy

This section explains how to mark audits on individual cells using the Cell Menu and how Audit uses shading to show information about cells. This section also includes strategies to use when isolating the source of an error within your workbook.

AUDIT CELL MENU

The Audit Cell Menu provides the option to audit the value of a cell. Its functions are described below:

Figure 1: Cell menu

While Audit is active a question mark (?) appears when you hover your cursor over an unaudited workbook cell containing a formula or value used in a calculation. This indicates the cell may be audited. Cells that do not affect a calculation, such as a label cell or header name cannot be audited.

Figure 2: Cell Menu buttons

When you click the? on a cell, the Cell Menu appears, giving you the option to mark the cell as Suspect (with an X), or as Approved (with a checkmark). If you are unsure which mark to place on a cell, click the cell again to exit the Cell Menu.

Figure 3: Approved Cell

If you are confident that the value in a cell is correct, click the checkmark symbol in the Cell Menu to approve the value. Once a cell is approved, any predecessor cells that directly affect the value displayed in the checkmarked cell will be shaded blue. Cell shading is for audit purposes only and does not affect the workbook. Note that cell shading is only an indicator that the value of an Approved cell and its predecessors is likely to be correct. As you move through the workbook, the more cells you mark as Approved that feed into the first cell, the more likely it is that the value in the first cell you marked as Approved is really correct.

To manually remove cell approval, click the Checkmark to display the Cell Menu again. Audit will automatically remove cell approval if a change is made to a predecessor cell.

Figure 4: Suspected Cell

If you believe that the cell's value is incorrect, click the X symbol in the Cell Menu to mark the value as Suspect. Suspect cells and any predecessor cells that directly affect the value displayed in the Suspect cell will turn a shade of yellow or red. Note that cell shading is only an indicator that the value of an Suspected cell and its predecessors is likely to

be incorrect. As you move through the workbook, the more cells you mark as Suspect that feed into the first cell, the more likely it is that the value in the first cell you marked as Suspect is really incorrect. The deeper red in. Approved or blue predecessor cells will be shaded yellow or red until the Suspect cell is removed from the successor.

To manually remove an Suspect status, click the X symbol to display the Cell Menu again. Suspect status will automatically be removed by Audit if a change to a predecessor cell changes the displayed value of the Suspected cell.

Formula cells are cells that perform some function on data cells, such as summing.

Figure 5: Approved Region

When you mark an individual cell as Approved, the implication is that the displayed cell value, not necessarily its formula, is correct. If you Approve a cell containing a formula, cells used by that formula are inferred to be correct. This is called Inferred Approval. Similarly, if you mark a cell as Suspect and place an X on a cell that contains a formula, the implication is that the formula is incorrect or questionable and requires further investigation. Cells referenced from incorrect or questionable formula cells are also considered incorrect or questionable.

Figure 6: Audited Cells

Audited cells remain audited until their value changes. For example, if you mark a formula cell as Suspect and later change one of the predecessor cells, the audit becomes invalid for the first formula cell as well as the predecessor cell. Because changing a cell's value may affect its status as Approved or Suspect, you should re-audit a cell if its value changes. Audit clears the audit of that cell so you can go back and re-audit by approving or rejecting the new value.

CELLS AND CELL SHADING

Cell Types

Certain cells will be shaded while Audit is active. This shading relates to the display of Audit information only, the formatting of the workbook is not actually changed.

Workbook cells may contain one of 4 general types of values; data, formula, labels, or none (empty cells). Data cells are referenced by formula cells. Empty cells (cells that don't contain a value) may be a data cell if it is referenced in a formula. If a cell containing a value is not referenced by a formula cell, then that cell is a label cell. Only cells referenced or referencing other cells may be audited. These cells are the only ones involved in the calculation of a result. Other cells that do not affect calculations results, such as label cells, cannot be audited. Cells with data that cannot be audited should be investigated separately as potential errors.

Blue Shaded Cells

Cells marked with a Checkmark, as well as all predecessor cells that directly affect the checkmarked

cell, are shaded blue. The Checkmark indicates you are satisfied with only the displayed value of the cell not the region formula that may be referencing that cell. You do not have to examine the contents of the cell in order to Checkmark it, only the displayed value.

Predecessor cells that directly affect the displayed value of a checkmarked cell are also shaded blue. These cells are listed in the Audit Progress subpane as Inferred Approval cells. Inferred approval means that by virtue of approving the outcome of a calculation using the cell, you are satisfied with the value of the input cells.

If a cell is changed that affects the displayed value of a checkmarked cell, then the checkmark is removed. If the cell remains blue it is an indication that the cell has inferred approval.

Yellow and Red Shaded Cells

Suspect cells are marked with an X. Cells marked with an X as well as any predecessor cells are shaded from yellow to red. Any previously blue shaded predecessor cells to the Suspect cell will also be shaded from yellow to red. These cells will revert to blue shading once the X is removed, assuming no other changes were made that affect the reason for the cell being shaded blue.

The yellow-to-red scale corresponds to that cell's likelihood of being the source of an error. This shading is the result of a proprietary algorithm taking into account many different factors. The darker the cell, the more influence that cell has on the displayed value of the Suspect cell. When tracking down the source of an error, the darker cells are the ones most likely to be the source of an error and therefore should be examined first.

Sometimes the darkest shaded cell is the cell marked with an X. This is a result of the algorithm used to trace error sources. In this case this is an indication that the most likely source of an error is the cell itself.

Audit Sequence

Cells may be audited in any sequence and to any percentage of completion. You may choose to audit only critical cells, random cells, or all cells.

Audits of very large workbooks may be saved at any time so as to ensure progress is not lost when lengthy audits are conducted.

Workbook Formatting

Audit does not change the cells or cell formatting of a workbook. Stopping Audit will remove Audit shading and markings. If you wish to save Audit markings and shading you must click the Audit Save button to store your audit progress. You may reload audit status at any time to see your markings and shadings, or to continue or modify an audit.

In some cases users may format cells using Excel's cell shading function. Audit cell shading will overlay this formatting while Audit is active. Sometimes the Audit shading combined with the overlaid shading will produce a hybrid shading. Hybrid shading does not affect the Audit algorithms nor the workbook itself.

If you suspect a user has manually shaded a cell similar in scheme to how Audit shades cells then simply turn off Audit after saving. Any shading that remains is Excel format shading.

Fault Investigator

The Fault Investigator provides a list of cells that directly influence the value displayed by a Suspected cell. The cells with the most influence on the displayed value of the Suspected cell are at the top of the list. By clicking an entry in the Fault Investigator list you will automatically be taken to that cell. Note that in the case of hidden cells the cell contents will appear in the Excel formula bar, however the cell itself will not be displayed in the

body of the workbook. Note that you cannot navigate to a hidden sheet from the Fault Investigator.
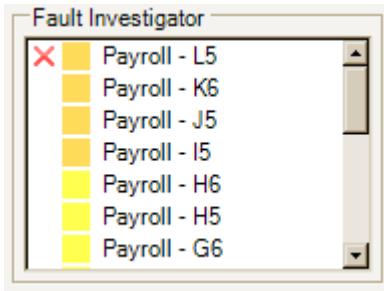

Figure 7: Fault Investigator

The Fault Investigator identifies the audit status of cells listed in the investigator. The colored box in front of the text corresponds to the Audit shading of the cell. Any checkmark or X characters will be noted on the list. If a cell is active its corresponding entry in the list will be highlighted.

In practical usage, by clicking on the first item in the list you will be taken to the cell most likely to have caused an error you are investigating.

If you make a change to a cell that affects the displayed value of a Suspect cell, then the X is removed from that cell. Consequently all cells shaded yellow or red by Audit based upon the X will have their Audit shading removed. The Fault Investigator will also reorder itself after the change to represent the most current audit data.

Audit Statistics

Audit keeps track of audit progress in the Audit Progress subpane. Four statistics about the audit are tracked:

Figure 8: Audit Progress

Cells Approved: The total number of cells that have been checkmarked out of the total number of cells that are eligible for audit in the workbook.

Inferred Approval: The total number of cells that have an inferred approval based on them being predecessor cells to cells that have been checkmarked, out of the total number of cell that are eligible for audit in the workbook.

Cells Marked X: The total number of cells marked with an X out of the total number of cells that are eligible for audit in the workbook.

Regions Approved: The total number of Regions that have been approved out of the total number of Regions in the workbook. Approving a Region does not approve nor infer the approval of any cells.

The Cells Approved statistic combined with the Inferred Approval statistic provides the total number of cells determined to be approved in the workbook.

There are several types of audits and therefore several possible policies and objectives regarding what are acceptable results of an audit. For example;

- Critical spreadsheets may require 100% audit of each data cell and each region. In this case there would be zero inferred approvals and zero Xs.
- Some audits may be sample based, focusing on high impact cells such as a gross margin or pricing calculation. In this case the percentage of approved and inferred cells needs to be determined by policy and reviewed. There should be no cells marked with X.
- An audit performed by a workbook developer should not have any Suspect cells since the developer can find and fix any problems during the audit.
- An audit performed by a third party may result in cells being marked as Suspect if the auditor is not authorized to perform corrections, only find them.

Region Shading

Regions are provided as a way to efficiently audit large areas of the workbook. A Region is defined as a group of identical formula cells performing an identical purpose in the workbook. Formula cells with identical formulas performing different purposes within the workbook will have different Regions assigned. Regions can be horizontal or vertical.

Regions are determined by Audit in real time as a workbook is created or modified. Region determination occurs when Audit is first started on a workbook. It will remain until Audit is stopped.

Audit outlines unapproved Region with a purple border. Once a Region is approved the border becomes green. Formatting of the workbook is not affected by Audit. Region borders only appear when Audit is active.

APPROVING A REGION

To approve a Region make one cell within the Region active, making the Region active. When a Region is active the Region border becomes highlighted and the Region formula appears in the Regions subpane. It does not matter which cell in the Region is made active since all cell formulas are identical. Navigating to a Region through the Regions navigator will make the top-left cell in the Region active.
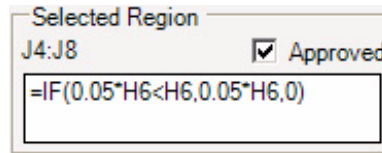
Figure 9: Selected Region

Once a cell in the Region is active and you are satisfied with the formula, check the Approved box in the Selected Region subpane. The Region border will then turn green. The number of Approved Regions is also updated the Audit Statistics subpane.

When a Region is approved only the corresponding formula is approved. Approving a Region does not mean that the displayed values have been audited or are correct, only the formula. Predecessor cells from which the displayed values in a Region are derived should be audited separately.

REGION EXAMPLES

The following picture contains examples of various Region highlighting. Note that cell G6 is active and therefore has the characteristic highlighting Excel uses to show which cell is active. The border around cells G4 to G8 indicates the Region is active.

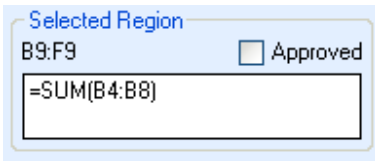Figure 1: Region Example

EXCEL FORMULA FORMATS

Figure 10: Excel formula formats

Audit finds Regions based on how Excel internally tracks formulas, which differs from how formulas are normally displayed to the user. In the formula bar in Excel your formula is seen in the absolute display format known as A1 style. A1 style gives the names of cells referenced by their absolute letter and number location, for example D6 indicating the cell location is at column D row 6.
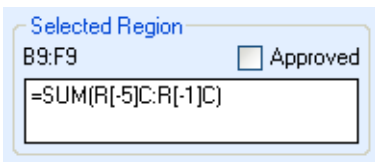

Figure 11: Selected Region

Excel internally records formulas in relative format known as R1C1 style. R1C1 locates cells based on their relative position in a workbook to cells that are referenced in formulas. In the case of identical formulas within a Region, the Region will have different A1 formulas representing different rows, but the cells will all have the same R1C1 formula. R1C1 format aids experienced users to develop workbooks faster.   Note that both of the previous pictures refer to the same Region bounded by cells B9 to F9.

If you click the Options button on either the Audit Toolbar or Audit Drop Down menu you can choose to display Region formulas in either A1 or R1C1

style in the Regions Approved subpane.   The default setting is A1 style.
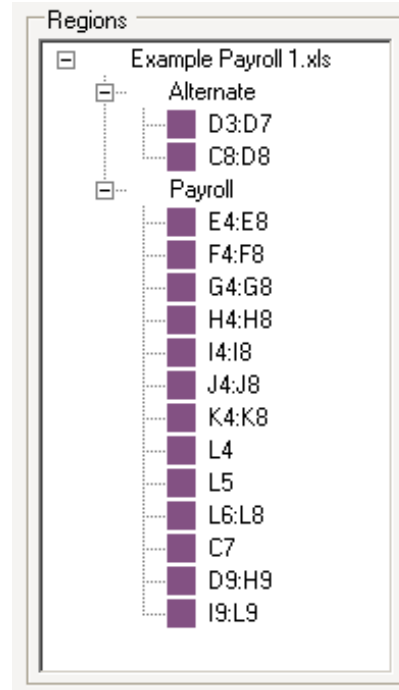

Figure 12: Regions Navigator

REGIONS NAVIGATOR

A list of the Regions in the active workbook is located in the center of the Audit Task Pane. The regions are identified by their worksheet in the workbook, and then by their cell range. Colors in the navigator correspond to the Region border colors.

Clicking on a listed Region in the navigator will automatically make the top cell in that Region active regardless of where the Region is in the workbook. You will be taken to the active cell in the selected Region.

Regions are sorted in the navigator in the most efficient way should you wish to audit the entire workbook. By progressing systematically through the list of Regions you will efficiency audit all Regions. You may choose to audit only critical, random, or all Regions.

Working with Audit Files

An important concept to remember when working with Audit, is that the audit data is maintained separately from the Excel workbook data. Performing an audit on an Excel workbook involves reviewing the values and the formulas in the workbook to ensure they are valid. You can save the audit file at any time for future use. **Note, however, that when saving a spreadsheet for the first time, you must first turn off Audit. Audit does not support the Excel Save As function.**

A single audit can be leveraged against multiple workbooks. For example, the saved audit of a company's January financial statement can be opened and compared to the February workbook update. The user will quickly see which data and Regions are the same and which have changed. Each time the workbook is updated the new audit can be saved. Focusing only on audit changes makes future audits much faster.

When Audit is stopped or your workbook is closed you will be prompted to save your current audit. An Audit file does not contain any information contained in your workbook, so you must save your workbook if you have made any changes to it during your audit.

SAVING AUDIT FILES

Saved audits can be used to create workbook templates and save time by allowing you to audit only changes. Audit files are saved to the same folder location as the Excel workbook to which they refer and can be identified by their .i5a extension. The saved Audit file does not contain any workbook data. Only encrypted Audit details are stored.

To save an audit file:
1. Click Save on the Audit toolbar.

2. Specify a name and location for the audit file.

   Note: When an Audit file is first saved, the default file name is the same as the corresponding workbook name. You may change the file name as desired.

3. Click **Save**.

OPENING AUDIT FILES

Once an Audit file is saved, it can be opened alongside the workbook used to create it. This allows you to easily continue working on the workbook, review a worksheet submitted by another person, and update the audit as you update the workbook.

If the workbook has been changed while Audit was inactive, Audit will remove approval from those cells that have changed since the audit was last saved. This function helps you identify the location of changes in your workbook, but does not specify the nature of those changes. This feature can be used when a workbook is shared with others.

PRINTING AUDIT FILES

The print command is found in the Audit drop down menu, located on the Excel menu bar when Audit is installed. Utilizing this command will create a printout of workbook and audit statistics.

Tips & Tricks

Strategies for Using Audit

The following strategies enabled by Audit will help you produce workbooks more efficiently and robustly.

AUDITING MULTIPLE WORKBOOKS

You can use Audit to audit multiple workbooks at once. Start a second instance of Excel. Double clicking on a workbook file will not open a second Excel instance; instead go to **Start |Programs | Microsoft Office| Excel**. In this new instance of Excel, open the second workbook and start Audit.

A single audit can be leveraged against multiple workbooks. For example, the saved audit of the January financial statement can be opened and compared to the February workbook update. The user will quickly see which data and Regions are the same and which have changed. Each time the workbook is updated the new audit can be saved. Focusing only on changes makes future audits much faster.

MULTIPLE AUDITS ON THE SAME WORKBOOK

Multiple audits can be conducted on the same workbook. The audits can then be easily compared to save time and to maximize audit accuracy.

IDENTIFYING ILLOGICAL REGIONS

One of the most powerful uses for Regions is the clarity they show errors in workbook structure. By taking a moment to consider the logical flow of data in your workbook and comparing that logical structure to the drawn Region structure, you can easily find a large number of potential errors in a workbook.

The sample workbook above contains three easy ways to identify errors using Regions located in the Audit Task Pane:

- A cell that should be a data cell is accidentally input as a formula cell.

- A region that should be continuous is split into more than one piece.

- The two Regions on the top right are suspicious.

	A	B	C	D	E	F	G	H	I	J	K	L
1						XYZ Company Payroll Week 8						
2												
3	Emp #	Allow	Hourly Pay	Hours Worked	Regular Pay	OT Pay	Gross Pay	Adjusted Gross	Federal Income Tax	Social Security Tax	Medi Tax	Net Pay
4	5	0	10.00	30	300.00	0.00	300.00	300.00	60.00	15.00	6.00	219.00
5	15	1	13.00	50	520.00	195.00	715.00	655.00	196.50	32.75	13.10	427.75
6	23	5	10.00	20	200.00	0.00	200.00	-100.00	-10.00	0.00	-2.00	-88.00
7	33	1	10.00	10	100.00	0.00	100.00	40.00	4.00	2.00	0.80	33.20
8	41	1	25.14	50	1005.60	377.10	1382.70	1322.70	396.81	66.14	26.45	833.30
9	Total			160	2125.60	572.10	2697.70	2217.70	587.31	100.89	38.35	1206.25

Figure 1: Locating suspicious regions

Identifying Errors

The sample workbook above contains three easy ways to identify errors using Regions located in the Audit Task Pane:

- A cell that should be a data cell is accidentally input as a formula cell.
- A region that should be continuous is split into more than one piece.
- The two Regions on the top right are suspicious.

USING CELL SHADING TO TRACE CELLS

When an X is placed on a cell, it is an indicator that the cell value may be incorrect, or in other words, the values in cells referenced by the Suspect cell are shaded. In addition to being used for tracing error sources, this is used to see if the formula in the Xed cell is referencing the correct cells.

Figure 1: Tracing Cells

In the above examples notice two incorrect formulas marked by Xs. In the example on the left, the "Net Pay" formula references a cell in the row

below it. The Audit shading makes it is clear that the "Medi Tax" value from the wrong employee is being included in the summing calculation. In the example on the right, notice not all of the appropriate cells are being included in this subtotal.

Finding Hidden Data

Hidden data is a common workbook error. Hidden data can be incorrect, untested, or mechanisms to induce fraud. Audit will help you find hidden data in your workbook.

Hidden data can take the form of:

- Data in cells hidden by using the same color for the cell background and font
- Workbook sheets hidden within Excel. Hidden worksheets can be hidden using an Excel function or by creating a program in Excel's program language, VBA. Regions on hidden worksheets and referenced cells will appear in the Fault Investigator. The worksheet will remain hidden. If you see a sheet name in the Regions Navigator or Fault Investigator that is not visible on your workbook, it is probably a hidden sheet. More information on hidden worksheets is available at:
  http://support.microsoft.com/kb/213609/en-us
- Hidden rows and/or columns hidden using an Excel function. Hidden rows and columns are visible through the Region Navigator and Fault Investigator. If you jump the cell or Region's location you will only see the contents of the cell or Region in the Excel formula bar. You will be taken to the correct area of the workbook so you can unhide the rows or columns if desired.

Right-Click Short-Cut

Right-clicking the? on a cell places a Checkmark on the cell. Right-clicking the Checkmark on a cell places an X on the cell. Right-clicking the X on a cell removes the X from the cell.

Glossary

X

The symbol used by Audit to distinguish cell values as incorrect or questionable.

?

The symbol used by Audit to identify a data for formula cell that may be audited.

A1 FORMULA STYLE

The standard method used by Excel to display formulas, for example "=(A1+B1)+2".

ACTIVE REGION

The currently active Audit Region, as indicated by a purple border drawn around the region, and purple highlighting of the Region in the Regions pane.

APPROVED CELL

A data or formula cell with a checkmark. The cell will also be shaded blue unless it is in the logic chain of a suspect cell.

APPROVED REGION

Region approval indicates the formulas in the region are approved and not the displayed values. The Region will have a green border drawn around it, and green highlighting of the corresponding entry in the Regions navigator pane.

SELECTED REGION

Subpane in Audit Task Pane, displays the formula and approval status of the currently active Audit Region.

REGIONS

Subpane in Audit Task Pane that lists all regions in the workbook as well as their approval status. You may instantly go to the top cell in the corresponding Region by clicking on a listed region.

AUDITED REGIONS

In the **Audit** Progress subpane, total quantity of approved Regions.

AUDITED CELL

Any data or formula cell with either a checkmark or X affixed

to it.

CELL MENU
The small menu that appears over a cell when the? is clicked while hovering the cursor over a audit able cell. The Cell Menu is what allows a checkmark or X to be affixed to a cell, or to change a previously marked cell.

CHECKMARK
The symbol used by Audit to distinguish cell values as correct. Once checkmarked the cell and any predecessor cells that directly affect the value displayed in the checkmarked cell will turn blue, unless those cells are in the logic chain of a cell that has been marked as being suspicious.

DATA CELL
A cell containing data used by formulas within your workbook. These cells are eligible to have a cell audit recorded.

FAULT INVESTIGATOR
Subpane for Regions Navigator in Audit Task Pane. Provides a list of cells that influence the value of a questionable or incorrect cell. The most likely sources of errors are at the top of the list. By clicking on the first item in the list, you will be taken to the cell most likely to have caused the error. The highlighted cell in the navigator is active. If your worksheet does not have any Xs the Investigator will be empty.

FORMULA CELL
A cell containing a formula. These cells are eligible to have a cell audit recorded and also define a logical Region.

I5A
The unique Windows file suffix used by Audit to identify Audit files, for example "Payroll Week 8.i5a".

AUDIT TOOLBAR
Contains Audit action buttons. The Audit Toolbar initially appears on the far right side of the Excel window when Audit is installed.

INFERRED APPROVAL
Cells that are referenced in approved formulas are said to have inferred approval.

LABEL CELL
A cell containing text or numbers which are not used as data for any formulas. These cells cannot be audited by

Audit.

PREDECESSOR CELL
A cell referenced by a formula cell in a calculation.

R1C1 FORMULA STYLE
The internal method used by Excel to keep track of formulas. Formulas are displayed relative to other referenced cells, for example "=R5C[-6]+R2C2+2".

REGION
A group of formula cells performing an identical purpose in a workbook. Regions are distinguished by Audit with a purple or green box.

REGIONS APPROVED FUNCTION
The function that appears inside the Audit Task Pane and enables you to approve a Region's formula.

REGIONS NAVIGATOR
Part of the Audit Task Pane that provides a list of regions within the workbook. Purple boxes indicate unapproved regions. Green boxes indicate approved Regions. By clicking on a specific Region in the navigator, you can jump to its location. The highlighted Region in the navigator is active.

SUSPECT CELL
A cell with an X affixed to it. These cells are suspected of being wrong or have been marked with an X in order to investigate another cell.

TASK PANE
The main interface of Audit, displays information about the current audit as well as methods to instantly navigate within a workbook.

UNAPPROVED REGION
A Region that has not been identified as correct. Audit outlines these regions with a purple border. To approve a region check the "Approved" box in the Selected Region subpane. One cell within the Region must be active to approve the Region. When a Region is approved only the corresponding formula is approved.

VBA
"Visual Basic for Applications", a programming language provided by Microsoft for use in Excel applications.

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