

Comparing Operis OAK and Rainbow Analyst

Background

Operis OAK and Rainbow Analyst are both well-established Excel add-ins offering a range of analysis and auditing tools. Development of OAK goes back to 1997, and development of Rainbow began in 2000. Both add-ins have changed greatly since their initial launch.

One important difference between them is that Rainbow is a classic Excel add-in, developed in VBA (Visual Basic for Applications). OAK also started life as a classic VBA add-in, but it was later rewritten as a COM (Common Object Model) add-in. COM add-ins were introduced in Excel 2000; they offer a greater range and flexibility of user-forms, and because they are compiled rather than interpreted, they can have a speed advantage.

However, COM add-ins interact with Excel in a very different way from VBA add-ins, and in practice they can be more limited in the ways that they can directly modify a spreadsheet. Rainbow is specifically designed to modify the current spreadsheet, in order (for example) to show colour-coded blocks of formulas, and a COM add-in would be less suitable for this approach.

It is also worth noting that Microsoft is no longer encouraging the development of COM add-ins, and is now focusing on add-ins written in Javascript. But there is an installed base of thousands of classic VBA add-ins and millions of lines of macro code, and so VBA is likely to [continue to be popular for the next 10-15 years](#), and it will probably never completely die out.

Licensing model

Another important difference between OAK and Rainbow is in the licensing model. The 5th generation of OAK has moved to a subscription-based licensing model, and so of course if the subscription lapses then the customer will lose all access to OAK.

Rainbow implements a dual licensing model. Any purchase of Rainbow includes: (1) a subscription which entitles the customer to support and upgrades for a period of usually one or two years, and (2) a perpetual license whereby the customer may continue to use in perpetuity the version of Rainbow that was current at the end of their last subscription period.

Both OAK and Rainbow check the customer's licence details; OAK does this regularly during use, and Rainbow checks each time the customer opens Excel. However, the method of checking is very different; OAK requires an Internet connection to external Licensespring servers, whereas Rainbow uses an internal algorithm to validate the customer's licence key. This means that Rainbow, unlike OAK, does not transmit any customer information over the Internet.

Conclusions

The feature comparison table on the following pages provides a detailed comparison of the functionality of OAK and Rainbow. The headings are primarily based on the [printable manual for OAK version 5](#), and the presence or absence of a feature is indicated with a tick ✓ or a cross ✗.

We recognise that of course we are biased towards Rainbow, but we have tried to be fair to both products in the feature comparison table, and indeed it is clear from the table that both products offer solid functionality in the core areas that are now expected from any Excel auditing tool. But equally the two products have developed in different contexts, and so each will have its own unique features. And the table shows that whereas there are 23 features of OAK that are not available in Rainbow, there are far more (in fact 61) features of Rainbow that are not available in OAK.

Even if we discount the 24 items (on pages 6-8 below) which are effectively Search options available in Rainbow but not in OAK, this still leaves 37 functions in Rainbow that are not present in OAK. Some of these are minor utilities, but others (e.g. Password Tool, Structure Map, colour highlighting in Formula Scan, Issue Tracker, Data Explorer, Deep Clean, and analysis and comparison of VBA macro code) represent important areas of functionality that are lacking in OAK.

A number of Excel auditing tools, including OAK, claim to be the market leader in this field, but our analysis shows that Rainbow Analyst is well ahead of Operis OAK in its overall range of functionality, and deserves very serious consideration by any organisation looking for a tool to support spreadsheet auditing, whether for internal or external spreadsheets.

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Feature Comparison Table

	OAK	Rainbow
Map		
Report of copied formulas	✓ Map Workbook	✓ Formula Scan
Highlight formula blocks in unique colours	✗ The report (map) simply indicates copied formulas with textual symbols.	✓ Unique formulas are highlighted in colour in the workbook and listed in a separate report.
Report showing different types (numbers, text, etc.) of formulas and constants.	✓ Map Workbook	✓ Logic Analysis
Report of dynamic array formulas including spill ranges	✓ Map Workbooks	✓ Risk Map Array formulas
Compare		
Compare workbooks	✓ Compare Workbooks	✓ Comparison Toolbox
Compare worksheets	✓ Compare Worksheets	✓ Comparison Toolbox
Compare ranges	✓ Compare Ranges	✓ Comparison Toolbox
Report blocks of copied differences	✗ Each different cell is listed individually.	✓ Copied differences are grouped, minimising the size of the report.
Align rows and columns	✓ Align Rows / Align Columns	✓ Automatic adjustment for insertion / deletion.
Remove Compare modifications	✓ Compare Unmodify	✓ Automatic removal, but this can be turned off.
Compare macros (VBA) in two workbooks	✗ (not available)	✓ Comparison Toolbox

	OAK	Rainbow
Compare other objects (besides formulas and constants)	✗ (not available)	✓ Deep Compare
Names		
Recreate names	✓ Names Recreate	✗ Nearly all this functionality is in Excel's Name Manager.
Apply names	✓ Names Apply names	✗ Nearly all this functionality is in Excel's Name Manager.
De-apply names	✓ Names Deapply names	✓ Names Toolbox offers this, despite the claim in the OAK manual that "there is no capability equivalent to OAK's Deapply Names command in any competing Excel add-in".
Remove #REF! names	✓ Names Remove #REF!	✓ Names Toolbox
Delete names in cells	✓ Names Delete	✗ (not available)
Localize names in cells	✓ Names Localize	✓ Names Toolbox (interactive report)
Un-localize names or change localisation	✗ (not available)	✓ Names Toolbox (interactive report)
Build name database	✓ Names Build name database	✓ Names Toolbox (interactive report)
Hide or unhide names	✗ Names database shows hidden status, but does not allow it to be changed.	✓ Names Toolbox (interactive report)
Delete all names which are not used	✗ (not available)	✓ Names Toolbox

	OAK	Rainbow
Formulas		
Trace Nth precedent	✓ 1-9 dial-pad on OAK menu.	✗ Not directly available, but Cell Inspector traces precedents step-by-step.
Drill into formulas	✓ Formula Explorer	✓ Cell Inspector Parse Formula
Edit formulas	✓ Formula Explorer Edit	✗ Not needed, as Excel natively provides excellent formula editing capabilities.
Navigate through precedents and dependents	✓ Formula Walker	✓ Cell Inspector
Trace back to original cell	✓ Formula Walker	✓ Cell Inspector
Create cell bookmarks	✓ Formula Walker Bookmarks	✗ (not available)
Show likely description of each cell (e.g. Net Profit – Year 1)	✗ (not available)	✓ Cell Inspector
Reconstruct formulas	✓ Formulas Reconstruct	✗ (not available)
Optimize formulas	✓ Formulas Optimize	✗ (not available)
Prune inactive path	✓ Formulas Prune inactive path	✗ Not available, but Excel's own formula editor can show this.
Fan out precedents	✓ Formulas Fan out precedents	✗ (not available)
Search		
Arrays	✓ Search Arrays	✓ Risk Map Array formulas
Dynamic arrays	✓ Search Dynamic Arrays	✓ Risk Map Array formulas

















	OAK	Rainbow
Merged cells	✓ Search Merged cells	✓ Merged Cells Tool
Automatically unmerge cells	✗ (not available)	✓ Merged Cells Tool
Primary error cells	✓ Search Primary error cells	✓ Risk Map Error values (if error source option is turned on)
Hardcoded constants	✓ Search Hardcoded constants	✓ Risk Map Hard-coded numbers
Constant formula cells	✓ Search Constant formula cells	✓ Logic Analysis Formulas without cell references
Unreferenced cells	✓ Search Unreferenced cells	✓ Logic Analysis Output calculations
Conditional search	✓ Search Conditional search	✗ (not available)
References to blank cell	✓ Search References to blank cell	✓ Logic Analysis Blank input cells
Lone cell types / formulas / formats	✗ (not available)	✓ Risk Map Lone cells / Different formats
Outlier numbers	✗ (not available)	✓ Risk Map Outlier numbers
Variant text values	✗ (not available)	✓ Risk Map Variant text values
Hidden error values	✗ (not available)	✓ Risk Map Hidden error values
Excel error checks	✗ (not available)	✓ Risk Map Excel error checks
Conditional formatting	✗ (not available)	✓ Risk Map Conditional formatting
Data validation	✓ Formula Walker	✓ Risk Map Data validation
SUM containing subtotals	✗ (not available)	✓ Risk Map SUM containing subtotals

	OAK	Rainbow
Complex conditions	✘ Not directly available, but Summarize Risk Analysis should detect this.	✔ Risk Map Complex conditions
Multiple operations	✘ Not directly available, but Summarize Risk Analysis should detect this.	✔ Risk Map Multiple operations
Multiple references	✘ Not directly available, but Summarize Risk Analysis should detect this.	✔ Risk Map Multiple references
LOOKUP functions	✘ (not available)	✔ Risk Map LOOKUP functions
Volatile functions	✘ (not available)	✔ Risk Map Volatile functions
Cells in hidden row or column	✘ (not available)	✔ Risk Map Cells in hidden row or column
Hidden-format formulas	✘ (not available)	✔ Risk Map Hidden-format formulas
Numbers formatted as text	✘ (not available)	✔ Risk Map Numbers formatted as text
Formulas formatted as text	✘ (not available)	✔ Risk Map Formulas formatted as text
Invisible cell contents	✘ (not available)	✔ Risk Map Invisible cell contents
Hidden operators	✘ (not available)	✔ Risk Map Hidden operators
Defined scenarios	✘ (not available)	✔ Logic Analysis Defined scenarios
Unlocked cells	✘ (not available)	✔ Logic Analysis Unlocked cells
Intermediate workings	✘ (not available)	✔ Logic Analysis Intermediate workings
Circular references	✘ (not available)	✔ Logic Analysis Circular references
Labels (no precedents or dependents)	✘ (not available)	✔ Logic Analysis Labels

	OAK	Rainbow
Inconsistent precedent copies and other precedents issues	✗ (not available)	✓ Logic Analysis (Precedents tab)
Summarize		
Summarize workbook	✓ Summarize Summarize Workbook	✓ Summary Report
Graphical structure map	✗ (not available)	✓ Structure Map
List distinct formulas	✓ Summarize List Distinct Formulas	✓ Formula Scan
List referred constants	✓ Summarize List Referred Constants	✓ Logic Analysis Non-blank input cells
Risk analysis	✓ Summarize Risk Analysis	✗ Not directly available, but see next item.
Highlight potentially risky formulas in the workbook	✗ Summarize Risk Analysis only provides a list of formulas with a risk assessment.	✓ Formula Scan checks for a wide variety of risks and highlights the risks in the workbook.
Navigate through highlighted risk formulas and change highlight when fixed.	✗ (not available)	✓ Issue Tracker
Multi-layer cell notes to record progress and communicate with colleagues.	✗ (not available)	✓ Issue Tracker
List cross-references	✓ Summarize Cross References	✓ Inter-Sheet Logic
Analyse macros (VBA) and report obvious risks	✗ (not available)	✓ Risk Map
Worksheets		
Insert columns or rows	✓ Columns and Rows Insert	✗ Core functionality available in Excel
Delete columns or rows	✓ Delete Columns/Rows	✗ Core functionality available in Excel

	OAK	Rainbow
Transpose cells	✓ Cells Transpose	✗ Core functionality available in Excel
Copy address	✓ Cells Copy Address	✗ Core functionality available in Excel
Copy literal value	✓ Cells Copy Literal	✗ Core functionality available in Excel
Transpose cells	✓ Cells Transpose	✗ Core functionality available in Excel
Remove colour formatting	✓ Worksheets Remove Color Formatting	✓ Clear Cell Colours
Unhide rows and columns	✓ Cells Unhide Cells	✓ Security Manager Unhide rows and columns
(Un)protect and (un)hide worksheets	✓ Worksheets Worksheet Manager	✓ Security Manager
Set or remove “very hidden” status	✓ Worksheets Worksheet Manager	✓ Security Manager
Rename or reorder sheets	✓ Worksheets Worksheet Manager	✗ Functionality easily available in Excel
Utilities		
Re-colour cells	✓ Utilities Colors	✓ Format Editor
Re-colour fonts	✗ (not available)	✓ Format Editor
Convert numbers formatted as text	✗ (not available)	✓ Format Editor
Set or remove cell locking	✗ (not available)	✓ Format Editor
Change cell case	✓ Utilities Casing	✗ (not available)
Jump to next cell with different data type	✓ Utilities Jump	✗ (not available)

	OAK	Rainbow
Switch signs in formulas	✓ Utilities Switch signs	✗ Not available, but easily done in Excel's own editor.
Convert cell references from relative to absolute	✓ Utilities Convert References	✗ (not available)
List data links as shown in Excel	✗ (not available)	✓ Data Links
Save workbook formatting and revert back after changes	✗ (not available)	✓ Save Format and Undo Changes
Quickly unprotect worksheets and unhide worksheets and rows/columns	✗ (not available)	✓ Quick Clean-Up
Delete superfluous custom styles	✗ (not available)	✓ Clean Up Formats
Trim unused space around the used area of a worksheet	✗ (not available)	✓ Trim Unused Space
Select random sample of rows for audit purposes	✗ (not available)	✓ Sample Data
Randomise workbook contents to remove confidential material for sharing	✗ (not available)	✓ Scramble Workbook
List (old) cell notes and (new) threaded comments	✗ (not available)	✓ Comments Report
Delete (old) cell notes or (new) threaded comments	✗ (not available)	✓ Delete Comments
List charts, buttons and other graphical objects	✗ (not available)	✓ Graphics Report
Delete charts, buttons and other graphical objects	✗ (not available)	✓ Delete Graphics
Other functions		
Remove worksheet passwords	✗ (not available)	✓ Password Tool

	OAK	Rainbow
Unprotect (even password-protected) worksheets	 (not available)	 Password Tool
Force local or full global recalculation	 (not available)	 Calc Manager
Highlight cells to show logic (e.g. input, working, output)	 (not available)	 Logic Map
List all data tables and data connections	 (not available)	 Data Explorer
List all macros (VBA code)	 (not available)	 Macro Explorer
Reset custom formats even in corrupted workbooks	 (not available)	 Deep Clean Reset custom formats
List all data links even when not shown by Excel	 (not available)	 Deep Clean Report all external links
Delete names with phantom links (e.g. in corrupted workbooks)	 (not available)	 Deep Clean Delete names with phantom links