

Realtime Toolkit

Realtime Toolkit comprises a suite of utilities that automate common tasks in Revit. Individually, these tasks are simple and mundane, however they are time-consuming, error-prone, and tedious. We have designed Realtime Toolkit to equip each Revit user with the ability to quickly, easily, and accurately carry out repetitive tasks in order to save time and improve quality. All tools have a uniform interface, and are intuitive to use. All tools have an option to write a log file of the results.

Realtime Upgrade Tools

Realtime Upgrade Tools - Version: 2017.2.5 Build: 20200205.1427

File Type Options
 RVT RFA RTE RFT

Filter Options
Name Contains Match Case

Results

Name	Type	Status	Source	Destination
rt_TagWindow	.rfa	Exists-Overwrite	C:\Data\2015\Revit\Library\vt_Library\Annota...	D:\Data\Temp\2017\Annotations\
rt_TagWire	.rfa	Exists-Overwrite	C:\Data\2015\Revit\Library\vt_Library\Annota...	D:\Data\Temp\2017\Annotations\
rt_TagZone	.rfa	Exists-Overwrite	C:\Data\2015\Revit\Library\vt_Library\Annota...	D:\Data\Temp\2017\Annotations\
Tagging Floor Heightdocx	Exists-Overwrite	C:\Data\2015\Revit\Library\vt_Library\Annota...	D:\Data\Temp\2017\Annotations\
rt_ViewReference	.rfa	Exists-Overwrite	C:\Data\2015\Revit\Library\vt_Library\Annota...	D:\Data\Temp\2017\Annotations\
rt_ViewTitle	.rfa	Exists-Overwrite	C:\Data\2015\Revit\Library\vt_Library\Annota...	D:\Data\Temp\2017\Annotations\
rt_Revit2015_TagFa...	.docx	Copy	C:\Data\2015\Revit\Library\vt_Library\Design...	D:\Data\Temp\2017\DesignDocu
rt_Revit2015_Templa...	.docx	Copy	C:\Data\2015\Revit\Library\vt_Library\Design...	D:\Data\Temp\2017\DesignDocu
rt_A0_LH	.rfa	Upgraded	C:\Data\2015\Revit\Library\vt_Library\Frames	D:\Data\Temp\2017\Frames
rt_A0_LV	.rfa	Upgraded	C:\Data\2015\Revit\Library\vt_Library\Frames	D:\Data\Temp\2017\Frames
rt_A1_LH	.rfa	Upgraded	C:\Data\2015\Revit\Library\vt_Library\Frames	D:\Data\Temp\2017\Frames
rt_A1_LV	.rfa	Upgraded	C:\Data\2015\Revit\Library\vt_Library\Frames	D:\Data\Temp\2017\Frames

Source Files Folder
C:\Data\2015\Revit\Library\vt_Library

Same As Current Include Subfolders Copy Non-Revit Files

Destination Folder
D:\Data\Temp\2017

Append Version Year Subfolder Overwrite Existing

Log File: C:\Data\Temp\2017\leeb_000_20200208_1117.csv

Save Process Close

Select the Revit file type(s) to upgrade. Filter selection by text within the file name.

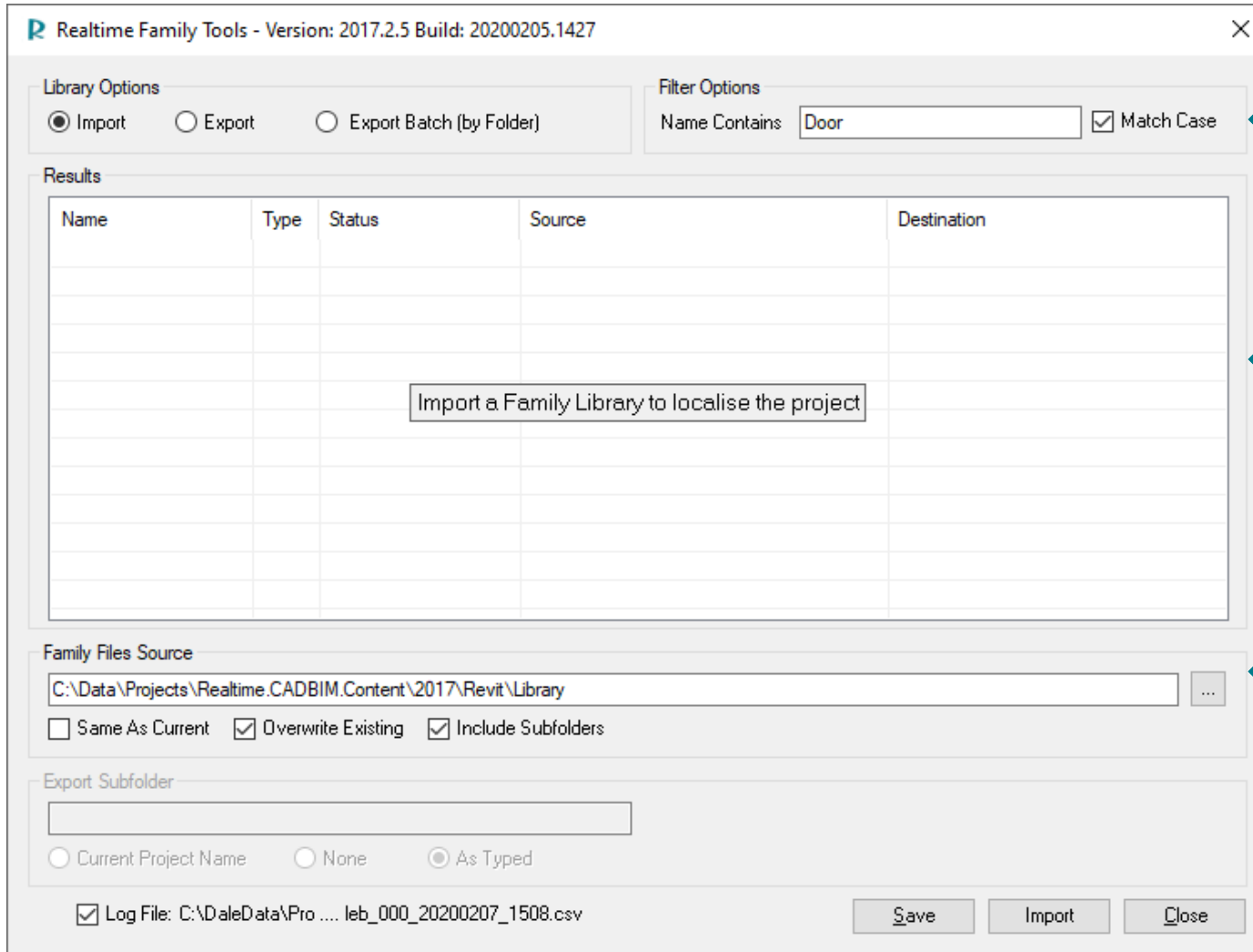
Results of the upgrade process are displayed as each file is finished. Status indicates the action taken depending on selected options and existing files.

Set the source folder for files to upgrade. Optionally include non-Revit files in the same folders (ie Images, DWG, etc). Note: companion TXT files for family types are automatically included.

Set the destination folder for upgraded files. Optionally add a sub-folder for the Revit version year (ie "\2019").

Batch upgrade Revit projects, families, and templates to your current version. Select destination folder, optionally add Year sub-folder. Processing can include source sub-folders and will retain folder structure. Filter selection by a text search feature.

Realtime Family Tools - Import



Insert Revit families from a folder into the current project. Filter selection by text within the file name.

Results of the import process are displayed as each file is finished. Status indicates the action taken depending on selected options and existing files.

Set the source folder for family files to import. Optionally include sub-folders, and confirm whether to overwrite already loaded Families.

Import all families from a library folder to standardise a project or template. Filter selection by a text search feature. Option to include source sub-folders and/or overwrite existing families.

Realtime Family Tools - Export

Realtime Family Tools - Version: 2017.2.5 Build: 20200205.1427

Library Options
 Import Export Export Batch (by Folder)

Filter Options
Name Contains Match Case

Results

Name	Type	Status	Source	Destination
Export all loaded component families to a Family Library. Library folders are organised by Family Category				

Family Files Destination
 ...

Same As Current Overwrite Existing Include Subfolders

Export Subfolder

Current Project Name None As Typed

Log File: C:\Data\Pro... leb_000_20200207_1508.csv

Save Export Close

Export current project loaded families to a folder(s) as RFA family files. Filter selection by text within the file name.

Results of the export process are displayed as each file is finished. Status indicates the action taken depending on selected options and existing files.

Set the destination folder for family files to export. Confirm whether to overwrite already existing Family files. Note: exported families are organised by categories into same-named sub-folders.

Set the destination sub-folder for exported files. Note: Family category sub-folders will be created below this one.

Create a family library by exporting all loaded families from a Revit project file to a category-based folder structure. Filter selection by a text search feature. Option to include sub-folders and/or overwrite.

Realtime Family Tools - Export Batch

Realtime Family Tools - Version: 2017.2.5 Build: 20200205.1427

Library Options
 Import Export Export Batch (by Folder)

Filter Options
Name Contains Match Case

Results

Name	Type	Status	Source	Destination
Get all projects in a folder and batch export all loaded component families to a Family Library. Library folders are organised by Family Category inside each project folder				

Project Files Source
 ...
 Same As Current Overwrite Existing Include Subfolders

Export Subfolder

 Current Project Name None As Typed

Log File: C:\Data\Projects\Realtime.CADBIM.TestData\Pro ... leb_000_20200207_1508.csv

Save Export Close

Open each Revit project in Source folders and export all loaded families to folders as RFA family files. Filter selection by text within the file name.

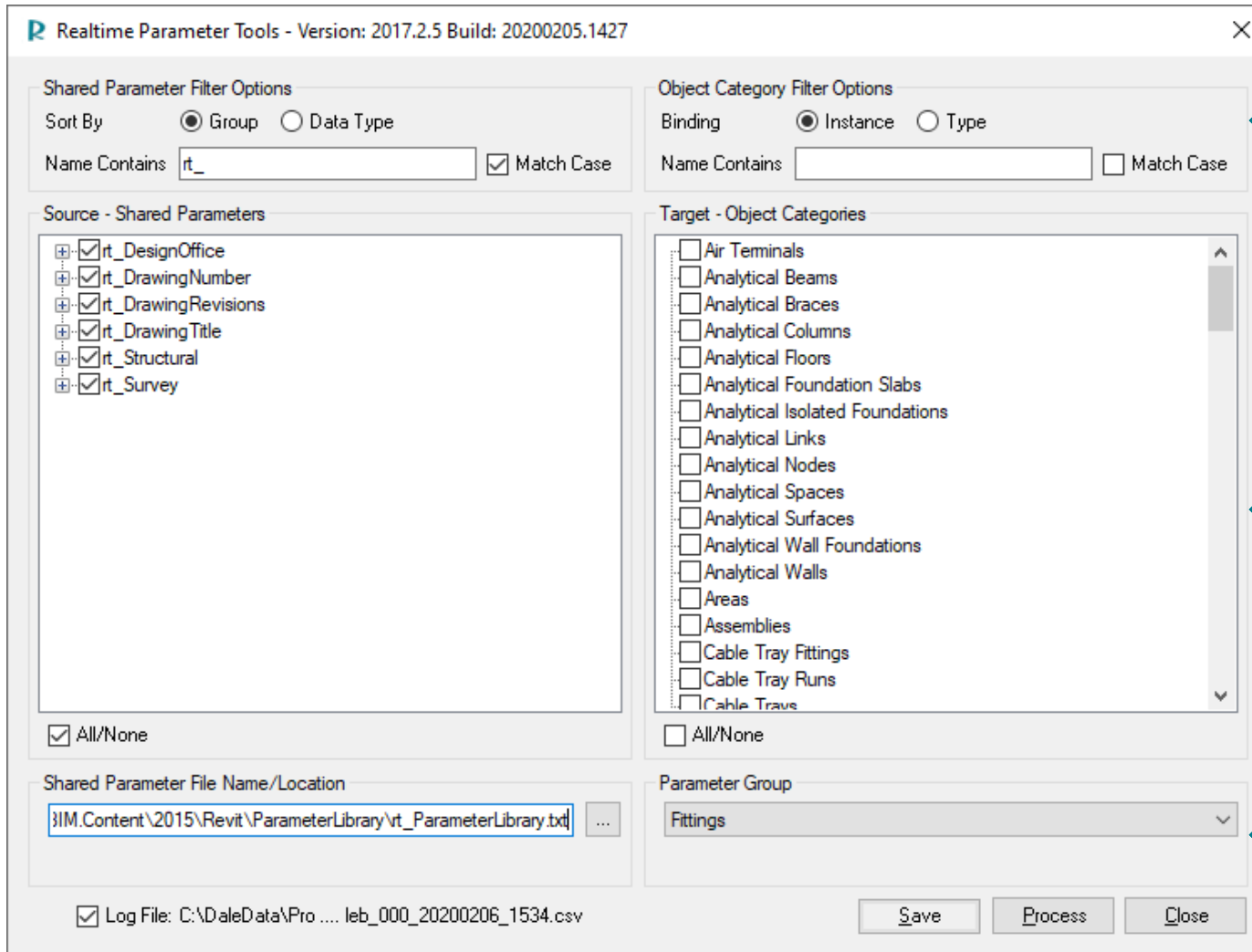
Results of the export process are displayed as each file is finished. Status indicates the action taken depending on selected options and existing files.

Set the source folder for Revit project files to batch process. Optionally include sub-folders, and confirm whether to overwrite already existing family files.

Set the destination sub-folder for exported files. Note: this folder will be inside the folder of the Revit project being processed. Family category sub-folders will be created below this one.

Create a family library by batch exporting all loaded families from multiple Revit projects to a category-based folder structure. Filter selection by a text search feature. Option to include sub-folders and/or overwrite.

Realtime Parameter Tools



Left: Sort displayed parameters by parameter group or by parameter data type (ie area, length, text, etc). Filter selection by text within the name.
Right: Set parameter bind type per Instance or per type. Filter selection by text within the name.

Left: Display shared parameters for selection to bind.
Right: Display available object categories to which the selected parameters will be bound.

Left: Select the shared parameter file to read into Source - Shared Parameters check list.
Right: Set the parameter group for the bound parameters.

Have you ever needed to add several parameters to every element in multiple project files? Aside from the time it takes to do this one by one, what about omissions or mistakes? This tool will bind multiple parameters from a shared parameter file to multiple categories, in seconds. Filter selection by a text search feature.

Realtime Line Style Tools

Realtime LineStyle Tools - Version: 2017.2.5 Build: 20200205.1427

Object Type
 Line Styles Line Patterns

Filter Options
 All (e.g. Family Clean)
 System (e.g. <Demolished>, etc)
 IMPORT* (e.g. Dwg Clean)
 Name Contains:
 Match Case

Replace Text

Legend
System
In-Use
Purgeable

Log Results

Selection List [80 of 80]

	Name	Element ID
<input checked="" type="checkbox"/>	<Demolished>	-2000285
<input checked="" type="checkbox"/>	<Beyond>	-2000287
<input checked="" type="checkbox"/>	<Centerline>	-2000288
<input checked="" type="checkbox"/>	<Space Separation>	-2000831
<input checked="" type="checkbox"/>	rt_08_Centre	261115
<input checked="" type="checkbox"/>	rt_01_Centre	261148
<input checked="" type="checkbox"/>	rt_04_Centre	261105
<input checked="" type="checkbox"/>	rt_02_Centre	261095
<input checked="" type="checkbox"/>	rt_07_Centre	261107
<input checked="" type="checkbox"/>	rt_04-DashDot	477905
<input checked="" type="checkbox"/>	rt_10_Solid	233196
<input checked="" type="checkbox"/>	rt_14_Solid	261166
<input checked="" type="checkbox"/>	rt_15_Solid	261176
<input checked="" type="checkbox"/>	rt_12_Solid	233198
<input checked="" type="checkbox"/>	rt_13_Solid	233200
<input checked="" type="checkbox"/>	Wide Lines	-2000044
<input checked="" type="checkbox"/>	<Area Boundary>	-2000079
<input checked="" type="checkbox"/>	rt_10_Centre	261123

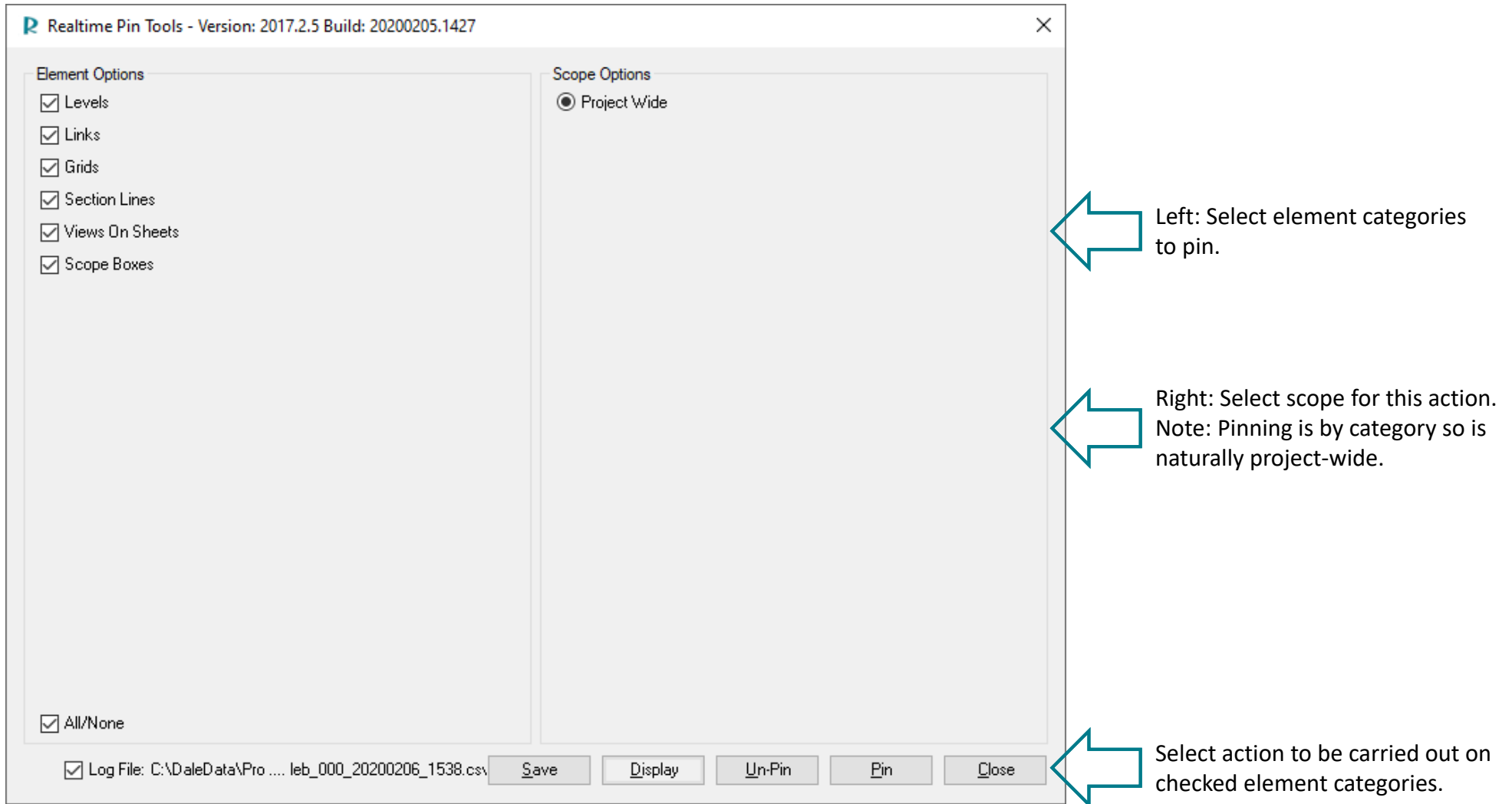
All/None

Save Rename Purge Close

- Left: Set option to display line styles or line patterns
- Left: Filter display by various options. Note: if filtered by text within the name, then there is an option to rename the line style or pattern by replacing that text.
- Right: Display filtered line elements and colour code each one as per the legend.
- Left: Legend that describes the status of lines displayed in the Selection

Ever needed to clean out 100s or 1000s of rogue line styles/patterns, particularly leftovers from a DWG import? Then you know that Revit has no multi-select, and each pattern needs to be individually selected, deleted and confirmed. This tool enables you to bulk purge, filter selection, view system line styles, remove DWG lines, and rename line styles and patterns.

Realtime Pin Tools



The screenshot shows the 'Realtime Pin Tools' dialog box. The title bar reads 'Realtime Pin Tools - Version: 2017.2.5 Build: 20200205.1427'. The dialog is divided into two main sections: 'Element Options' on the left and 'Scope Options' on the right. The 'Element Options' section contains a list of categories with checkboxes: Levels, Links, Grids, Section Lines, Views On Sheets, and Scope Boxes. The 'Scope Options' section has a radio button for 'Project Wide'. At the bottom left, there is a checkbox for 'All/None' and a 'Log File' path. At the bottom right, there are buttons for 'Save', 'Display', 'Un-Pin', 'Pin', and 'Close'. Three blue arrows point to the dialog with explanatory text: one points to the 'Element Options' list, one points to the 'Scope Options' section, and one points to the 'Pin' button.

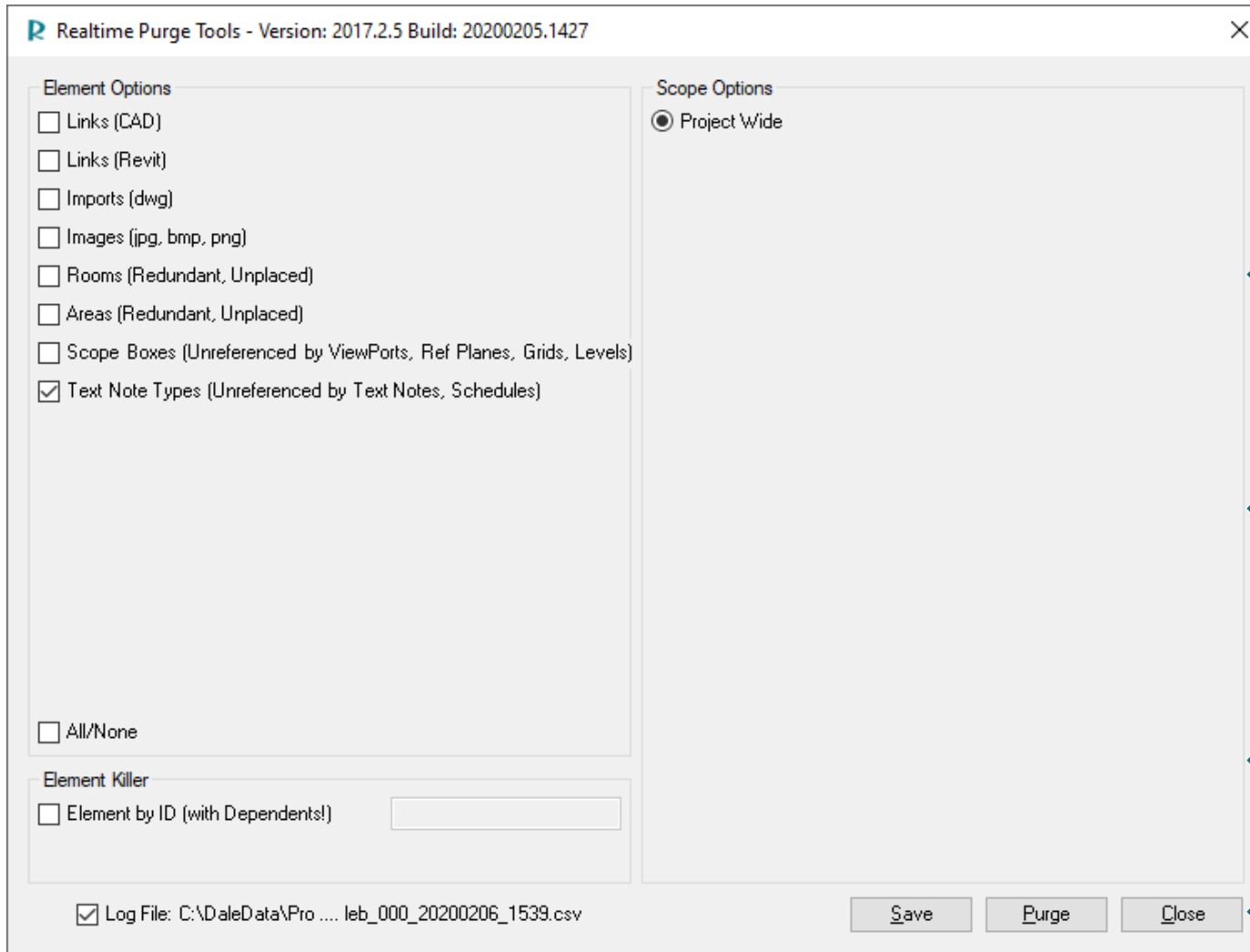
Left: Select element categories to pin.

Right: Select scope for this action. Note: Pinning is by category so is naturally project-wide.

Select action to be carried out on checked element categories.

Protect the project from mistakes by pinning critical element categories (levels, links, grids, etc). Extra features of this simple but invaluable tool include: unpin by category, and select (show) all pinned elements.

Realtime Purge Tools



Left: Select element types to purge or remove. Note: Choosing Links, Imports, and Images will result in their removal. Other elements will be check for redundancy as noted.

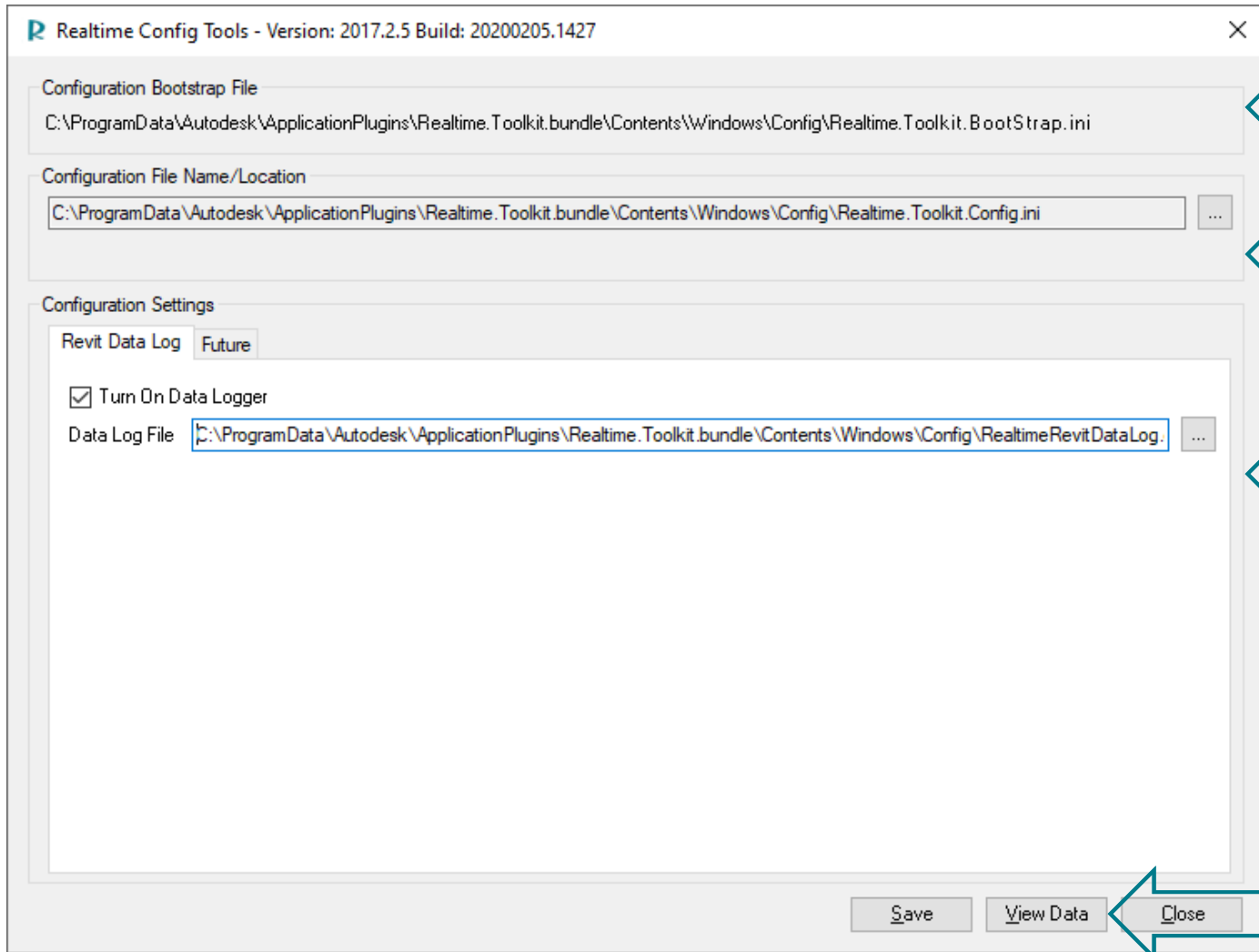
Right: Select scope for this action. Note: Purging is by element type so is naturally project-wide

Left: Element Killer will delete the specified element ID directly from the database, along with all dependent elements. **Use with extreme caution!**

Select action to be carried out on checked element types.

Prepare the project for sharing with consultants by cleaning unused/unreferenced elements. Purge rooms, areas, scope boxes, etc. Remove DWG imports and links, image files, Revit links and more. Includes Element Killer for the rare case where an element cannot be deleted but causes a failure when loading to Revit Server.

Realtime Config Tools



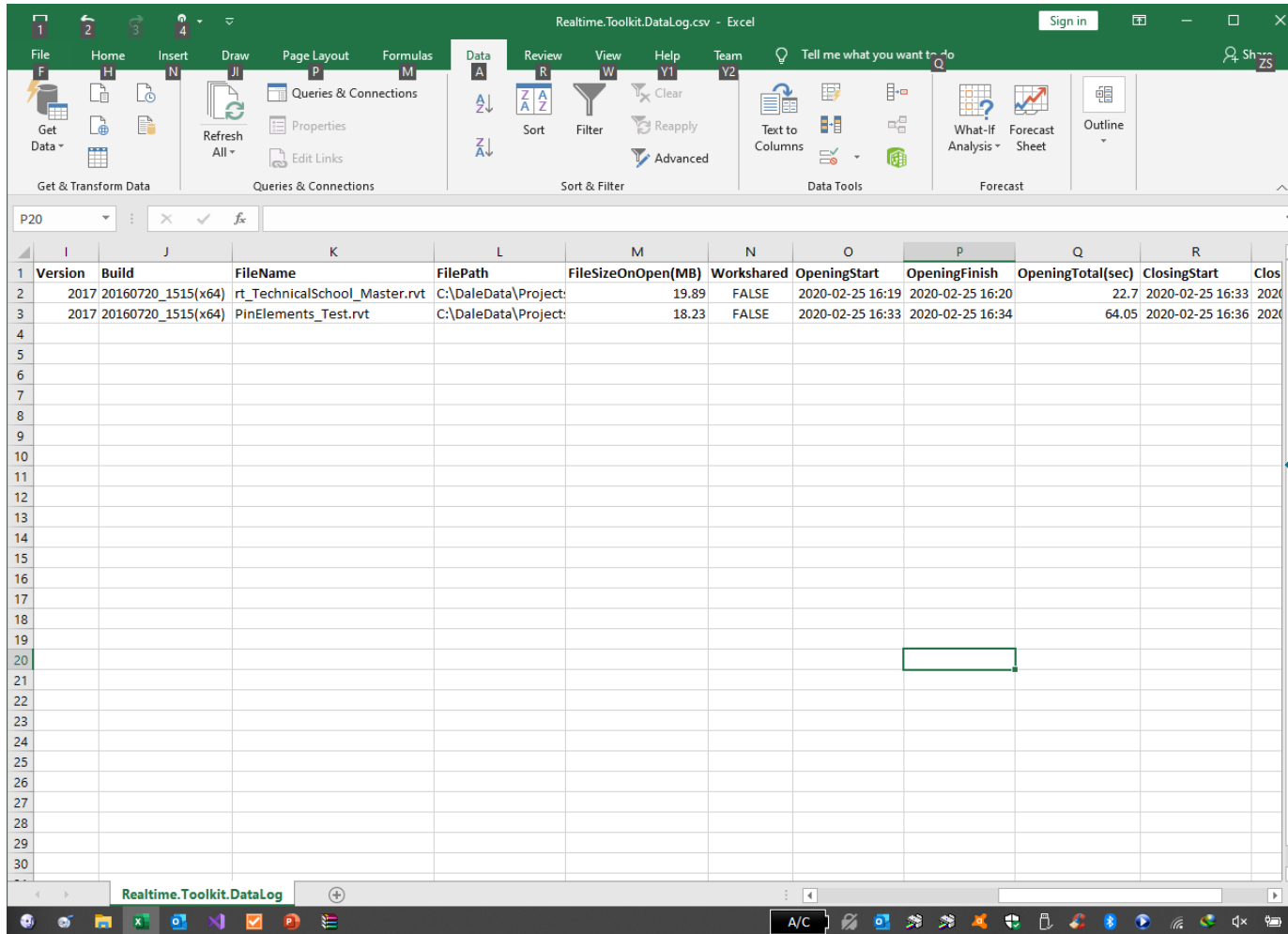
The screenshot shows the 'Realtime Config Tools' application window. The title bar reads 'Realtime Config Tools - Version: 2017.2.5 Build: 20200205.1427'. The window is divided into three main sections:

- Configuration Bootstrap File:** A text field containing the path 'C:\ProgramData\Autodesk\ApplicationPlugins\Realtime.Toolkit.bundle\Contents\Windows\Config\Realtime.Toolkit.Bootstrap.ini'. An arrow points to this field with the text: 'Realtime.Toolkit.Bootstrap.ini file contains a single entry: the location of the master config file.'
- Configuration File Name/Location:** A text field containing the path 'C:\ProgramData\Autodesk\ApplicationPlugins\Realtime.Toolkit.bundle\Contents\Windows\Config\Realtime.Toolkit.Config.ini'. An arrow points to this field with the text: 'Set location of the master config file: Realtime.Toolkit.Config.ini This file contains all the settings for features in the tabs below.'
- Configuration Settings:** This section has two tabs: 'Revit Data Log' (selected) and 'Future'. Under 'Revit Data Log', there is a checked checkbox for 'Turn On Data Logger' and a 'Data Log File' field containing the path 'C:\ProgramData\Autodesk\ApplicationPlugins\Realtime.Toolkit.bundle\Contents\Windows\Config\RealtimeRevitDataLog.'. An arrow points to this field with the text: 'Revit Data Logger captures information from each user for every Revit file opened. Data is written to a CSV file.'
 - Domain/Computer/IP
 - User Details
 - Revit Product/Version/Build
 - File Name/Path
 - File Size
 - Workshared
 - Opening Time
 - Closing Time
 - and More

At the bottom of the window are three buttons: 'Save', 'View Data', and 'Close'. An arrow points to the 'Close' button with the text: 'Open Revit Data Log file in your default spreadsheet application (eg Excel) for analysis and graphing.'

Settings for various features in Realtime Toolkit are configured here. The master configuration file: Realtime.Toolkit.Config.ini can be located on a common server drive such that every Revit workstation will share the same settings. The CAD-BIM Manager can control all user options from one place. Alternatively, each user can control their own settings.

Realtime Data Logger



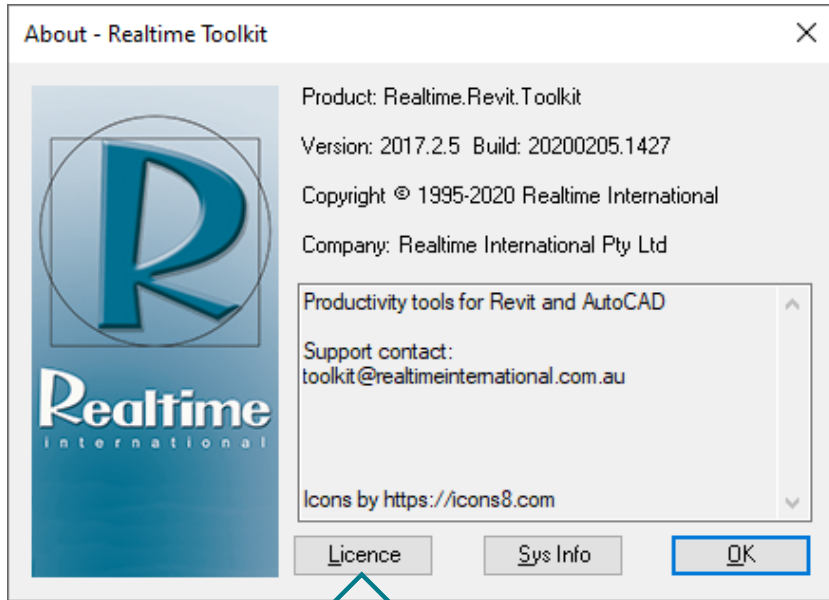
Version	Build	FileName	FilePath	FileSizeOnOpen(MB)	Workshared	OpeningStart	OpeningFinish	OpeningTotal(sec)	ClosingStart	ClosingTime
2017	20160720_1515(x64)	rt_TechnicalSchool_Master.rvt	C:\DaleData\Project	19.89	FALSE	2020-02-25 16:19	2020-02-25 16:20	22.7	2020-02-25 16:33	2020-02-25 16:33
2017	20160720_1515(x64)	PinElements_Test.rvt	C:\DaleData\Project	18.23	FALSE	2020-02-25 16:33	2020-02-25 16:34	64.05	2020-02-25 16:36	2020-02-25 16:36

Revit Data Logger captures information from each user for every Revit file opened. Data is written to a CSV file.

- Domain/Computer/IP
- User Details
- Revit Product/Version/Build
- File Name/Path
- File Size
- Workshared
- Opening Time
- Closing Time
- and More

This tool collects data from each Revit user to enable CAD-BIM Managers to find bottlenecks in their system. User/workstation details, file names, opening/closing file size, opening/closing times, Revit version/build, and more. The output file(s) can be opened in Excel for analysis and graphing. The CAD-BIM Manager can control all user options from one place.

Realtime Toolkit - About



Open a form that displays the installed licence details, or has options for purchasing a licence.

The About form displays information about the Realtime Toolkit, copyright statements, and contact email. The most important detail shown here is the Build reference. It is in the format: YearMonthDay.HourMinute (eg 20200205.1427) which is the date and time that the application was compiled. This should be provided with any support request.

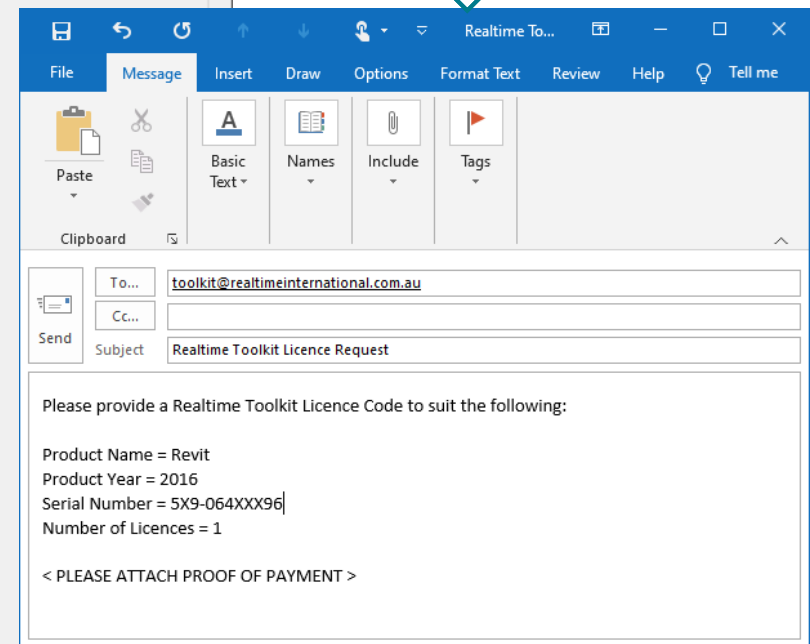
Realtime Licence Tools

Realtime Licence Tools - Version: 3.5.7373.24415 Build: 20200309.1333

Current Licence Details		Current Application Details	
Product Name	Product Code	Product Name	Product Code
<input type="text"/>	<input type="text"/>	Revit	R
Product Serial Number	Product Year	Product Serial Number	Product Year
<input type="text"/>	<input type="text"/>	559-064XXX96	2016
Licence Key	Licence Qty		
<input type="text"/>	<input type="text"/>		

*** Valid Licence Is Not Installed ***

[Request] a licence will generate this email based on the running version of Revit. Note! The licence file will be valid for this version-year of Revit and back to 2015. Later versions will require a new licence purchase. Please register Realtime Toolkit against the latest year Revit installed.



Realtime Toolkit requires a licence file to be installed after the 5 day evaluation period has passed. Each licence key is created for a single Revit Serial-Number and Product-Year combination. Realtime Toolkit will then be licensed and functional for all installed versions of Revit back to 2015. Each licence is perpetual, lifetime, permanent, forever.

Realtime Licence Tools

Realtime Licence Tools - Version: 3.5.7340.26027 Build: 20200205.1427

Current Licence Details		Current Application Details	
Product Name	Product Code	Product Name	Product Code
Revit	R	Revit	R
Product Serial Number	Product Year	Product Serial Number	Product Year
398-0[REDACTED]	2017	398-0[REDACTED]	2017
Licence Key	Licence Qty		
BLTN-DM[REDACTED]-MSP5-R	1		

The installed licence file has been created for this [product/serial-number/year] combination.

Any products for earlier years are valid under this same licence regardless of serial numbers.

Any products for exactly this year are valid under this licence only for the serial number displayed.

Any products for later years will require a new licence.

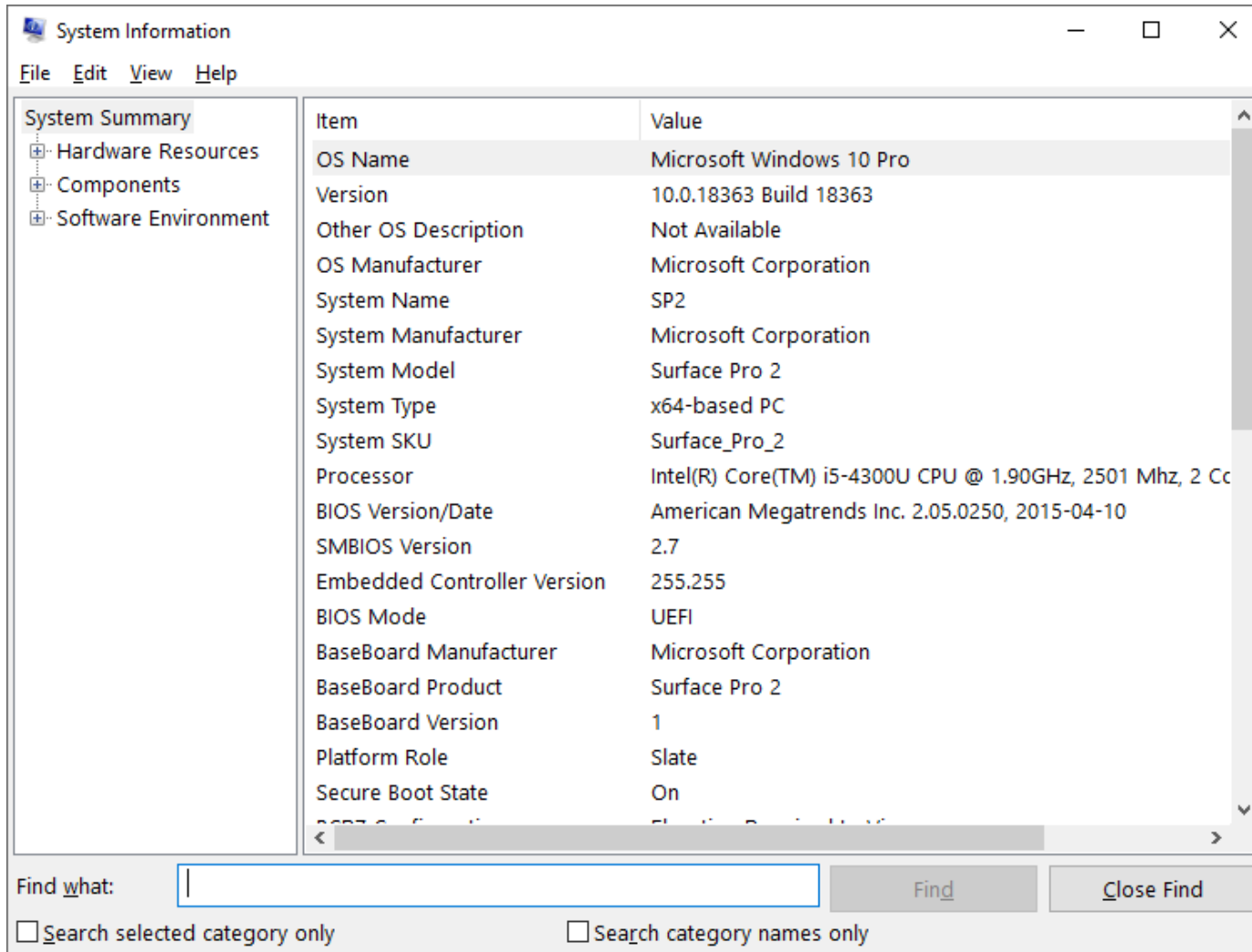
Valid Licence Is Installed

Install Purchase Request Error Log Close

Should you require support, this will generate an email and attach the error log file to assist us with debugging.

When the Realtime Toolkit licence file is installed, this form will display both the current Revit application details, and the current licence file details. Each licence key is created for a single Revit Serial-Number and Product-Year combination. Realtime Toolkit will then be licensed and functional for all installed versions of Revit back to 2015.

Realtime System Information



The screenshot shows the Windows System Information utility. The window title is "System Information" and it has a menu bar with "File", "Edit", "View", and "Help". On the left, there is a tree view with "System Summary" selected, and sub-items for "Hardware Resources", "Components", and "Software Environment". The main area displays a table of system information:

Item	Value
OS Name	Microsoft Windows 10 Pro
Version	10.0.18363 Build 18363
Other OS Description	Not Available
OS Manufacturer	Microsoft Corporation
System Name	SP2
System Manufacturer	Microsoft Corporation
System Model	Surface Pro 2
System Type	x64-based PC
System SKU	Surface_Pro_2
Processor	Intel(R) Core(TM) i5-4300U CPU @ 1.90GHz, 2501 Mhz, 2 Cores, 4 MB Cache
BIOS Version/Date	American Megatrends Inc. 2.05.0250, 2015-04-10
SMBIOS Version	2.7
Embedded Controller Version	255.255
BIOS Mode	UEFI
BaseBoard Manufacturer	Microsoft Corporation
BaseBoard Product	Surface Pro 2
BaseBoard Version	1
Platform Role	Slate
Secure Boot State	On

At the bottom, there is a search bar labeled "Find what:" with a text input field, a "Find" button, and a "Close Find" button. Below the search bar are two checkboxes: "Search selected category only" and "Search category names only".

Standard Microsoft System Information form. Accessible from the About form and provided to assist with support if required.

Realtime Master Document Index (MDI) Import Tools

Sheet N...	Parameter Name	Value Old (Sheet)	Value New (MDI)	Status
A001	Sheet Name	Title Sheet	Title Sheet	NO CHANGE
A001	Approved By	Approver	ABC	CHANGED
A001	Designed By	Designer	GHI	CHANGED
A001	Checked By	JLH	PQR	CHANGED
A001	Drawn By	SM	DJB	CHANGED
A001	Sheet Issue Date	11/16/12	8/06/2022	CHANGED
A101	Sheet Name	Site Plan	Site Plan	NO CHANGE
A101	Approved By	Approver	ABC	CHANGED
A101	Designed By	Designer	GHI	CHANGED
A101	Checked By	JLH	PQR	CHANGED
A101	Drawn By	SM	DJB	CHANGED
A101	Sheet Issue Date	11/16/12	9/06/2022	CHANGED

Excel Parameter Options:
Set the area of the spreadsheet to be imported.

PriKey Column is the column holding the Revit Sheet Number. This links Revit and the MDI. Parameter Row contains the Revit Parameter names.

Process Options:
Log Results Only will let you review the changes that would occur before processing multiple sheets.

Results of the MDI Import process are displayed here. These results are also saved in the Log File if it is ticked.

Set the source folder for the Master Document Index (MDI) Excel spreadsheet to be imported. Select the Excel Worksheet from those found.

Create Revit sheets and populate or maintain title block parameter information from an Excel spreadsheet. A Master Document Index (MDI) provides a Single Source of Truth for all Revit sheet deliverables. The MDI Importer optionally allows for a logged 'dry run' to check what changes would be made. This allows for QA control over the master list of deliverables.