Tag.AI – Quickstart

Version 0.9-b2.5

Installation

After downloading the plugin for your version of Revit, an icon is added to the Revit "Productivity" menu. This icon will be activated only when a model is loaded.

Upon first use, it will be necessary to enter the licensing information, consisting of the user name and the email address to which the activation key is to be sent.
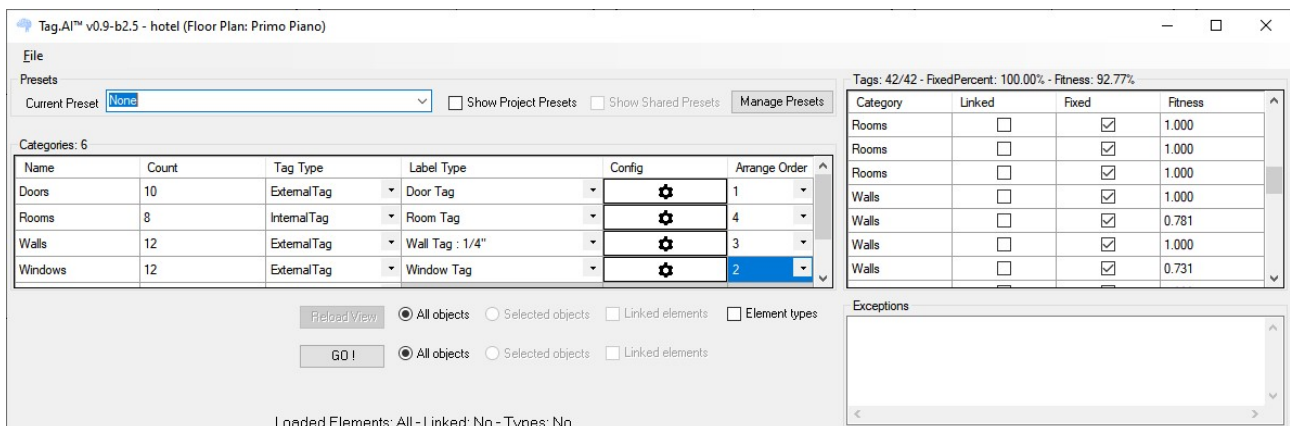
Once received via email, this activation key must be entered in the appropriate text box in order to use the tool.

Start

Selecting the 'Tag.AI' icon from the 'Productivity' menu the tool is activated; the current view is loaded and the elements of the main window are populated: 'Categories' and, if present, 'Tags', reflecting the current view situation

Main window

Heading

Displays the name of the plugin, its version, the name of the loaded model and the current view

"Presets" Panel

It allows the rapid selection of the tagging configuration (preset) of the current view among those previously saved, if present. For further details see the "Preset Management" paragraph

Current Preset

Allows the selection of the active preset from the list of enabled ones. When a preset is selected, the parameters it contains are loaded into the "Categories" panel, ready to be applied in the tagging

Show Project Presets

Enables/disables project presets. When this box is checked, the preset list is reloaded accordingly

Show Shared Presets

Enables/disables shared presets. When this box is checked, the preset list is reloaded accordingly

Manage Preset

Activates the Preset Management window (see corresponding paragraph)

"Categories" Panel

It contains information on the categories of elements present in the view and allows their configuration for the tagging operation.

Heading

Indicates the total of the categories in the view.

The taggable categories are listed first and then the others. The columns in the panel are the following:

Columns for all categories

Name

Category name

Count

Number of items belonging to the category present in the current view

Tag Type

Indicates the type of management that will be applied to the category by the tool. The possible values are:
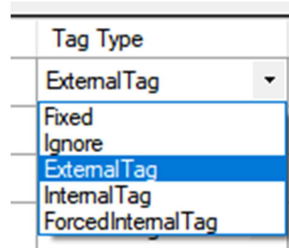
Ignore
The elements of the category are not tagged and can 'host' tags of other objects; in fact they are considered "free space"

Fixed
The elements are not tagged, and cannot "host" tags of other objects; in fact they are considered "occupied space"

Columns for taggable categories

Tag Type

In addition to the 'Ignore' and 'Fixed' values, the following are also present:

ExternalTag
The elements are tagged, but they cannot "host" their own tag nor those of other objects
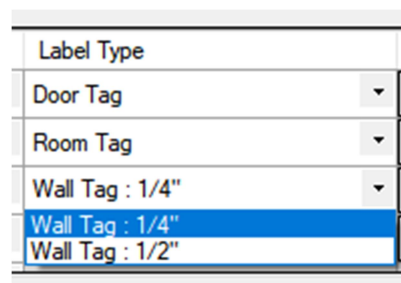
InternalTag
The elements are tagged, and can 'host' their own tag. For elements where the internal space is not sufficient to contain the tag, the "ExternalTag" category is used

ForcedInternalTag
The elements are treated as InternalTag, regardless of whether the internal space is sufficient to contain the tag

Label Type
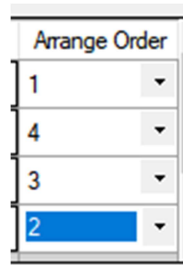Allows the selection of the type of tag to be used, choosing from those loaded for the category

Config
Activate the detail configuration window (see corresponding paragraph) of the category
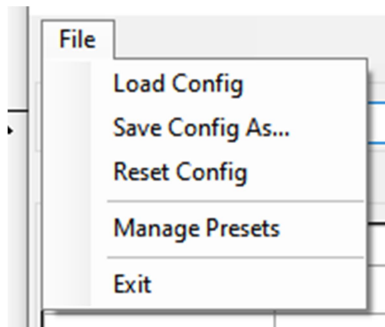
Arrange Order

Optional. If entered it indicates the priority of tagging of the category with respect to the others. The categories for which the order is not indicated are treated with equal priority among them

"File" Menu

It manages the loading and saving of the active configuration, allowing the creation of presets to be used in different views but with similar elements

Load Config

Loads a previously saved configuration file. The configuration is validated with respect to the current view before being activated

Save Config As

It allows you to save the current configuration as a preset, so that it can be loaded and applied later on the same or another view

Reset Config

Resets the current configuration, reinitializing all types of tags to the "Ignore" status

Manage Presets

Activates the Preset Management window (see corresponding paragraph)

"Tags" Panel

Contains information about tags in the view. By double-clicking on the corresponding line, the tag is selected and the view is zoomed in on the tag itself, allowing it to be identified and corrected if necessary.

Tags: 42/42 - FixedPercent: 100.00% - Fitness: 92.77%

Category	Linked	Fixed	Fitness
Rooms	☐	☑	1.000
Rooms	☐	☑	1.000
Rooms	☐	☑	1.000
Walls	☐	☑	1.000
Walls	☐	☑	0.781
Walls	☐	☑	1.000
Walls	☐	☑	0.731

Heading

It has the following format: <positioned tags>/<total tags> - Percentage of positioned tags - Fitness

The fitness value indicates in percentage the quality of the positioning of the tags with respect to the minimum distance from the relative element indicated in the configuration; is present only after a tag placement operation.

Columns

Category

Name of the category of the tagged item

Linked

If 'false' indicates that the element to which the tag refers is found in the active document; otherwise the item is in a linked model

Fixed

Indicates if the tag is correctly positioned according to the active configuration

Fitness

Indicates the quality of tag positioning; the value goes from 0 (very bad) to 1 (excellent); is present only after a tag placement operation.

Actions

Reload view

Updates the information in the panel by reading it from the view. It is automatically enabled when the view is modified, for example by inserting, moving or deleting a tag or an element, or by modifying the selection of the elements. When loading the view, you can choose the following options:

All objects/Selected objects

Allows you to choose whether to load all the elements of the view or only those currently selected; active only if at least one element has been selected

Linked Elements
Enables/disables the loading of items from linked models; only active if there are linked documents

Element types
Enables/disables the loading of the type of elements, allowing different configurations to be specified for different types of elements, even if they belong to the same category (see corresponding paragraph)

Go!
Validates and saves the current configuration, starting the tagging operation.

Start the magic !

All objects/Selected objects
It allows to choose if the tagging must be done on the whole view or only on the selected objects; active only if at least one element has been selected

Linked Elements
Enables/disables configuration and tagging on items from linked models.

Element types

Selecting "Element types" and reloading the view, the list of categories will be updated with the various types of elements that are part of each category; they are visible by selecting the "+" button next to the name of the category itself (by pressing "-" thelist of types is hidden again):

Categories: 26

	Name	Element Type	Count	Tag Type		Label Type		Config	Arrange Order	
—	Doors		10	ExternalTag	▾	Door Tag	▾	⚙	1	▾
☐	Doors	36" x 84"	8		▾					
☑	Doors	68" x 80"	2	InternalTag	▾	Door Tag	▾	⚙		▾
—	Rooms		8	InternalTag	▾	Room Tag	▾	⚙	4	▾
☐	Rooms	Room 1	1		▾					
☑	Rooms	Room 13	1	ExternalTag	▾	Room Tag	▾	⚙		▾
☐	Rooms	Room 14	1		▾					

By checking the selection box next to the type, it is enabled, allowing a specific configuration; in the absence of changes to the type, the standard configuration chosen for the category will be applied.
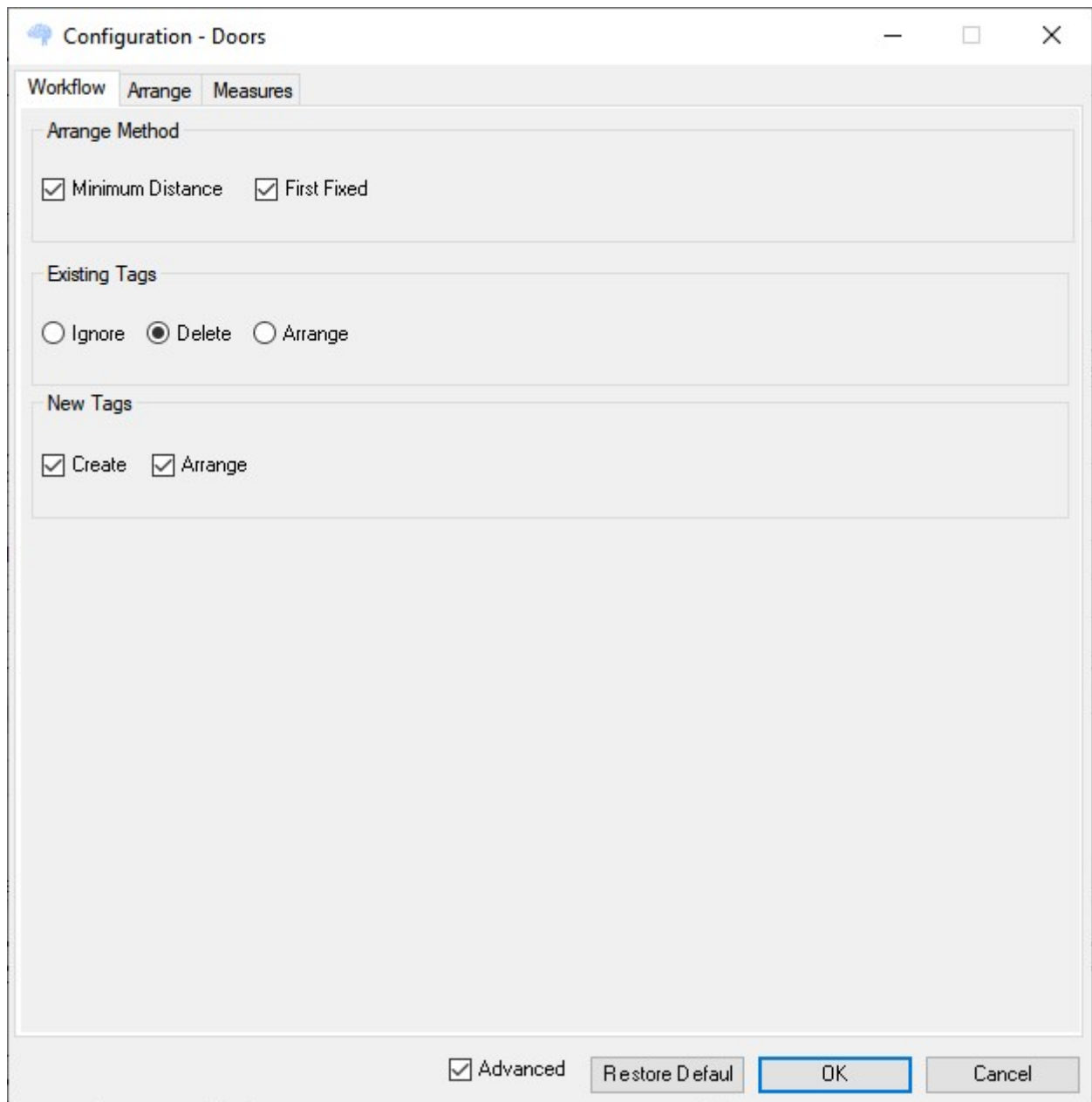
Category configuration

It is activated by the 'Config' button in the 'Categories' panel. It allows the setting of the parameters that manage the tagging mode in detail, for the elements belonging to the category (and possibly type) selected.

Warning: the modification of some parameters must be performed by expert users and only in the presence of real needs, as it can heavily affect the performance of the tool. For this reason they are only enabled if the "Advanced" box is checked.

'Workflow' Section

Set the methods and tagging modes

Arrange Method - *ADVANCED*

Chooses the methods to be applied to the tagging. These methods, if enabled, are executed in the following order:

Minimum Distance

Tries all the tagging combinations configured until it finds the one that allows the tag to be positioned as close as possible to the relative element.

First Fixed

Uses tagging settings but stops attempts at the first valid position, which may not be the best. Faster but less precise method than the previous one; it can be used for documents where extreme precision is not required.

The best results are obtained using both methods in sequence: first the tags are positioned precisely and then the rest are placed in the remaining space

Existing Tags

Defines the behavior of the tool with respect to the tags already present at the moment the tagging operation is started. It is used for incremental tagging operations

Ignore

Existing tags are not moved or modified in any way

Delete

Existing tags are deleted

Arrange

The existing tags are adapted, in the position and mode, to the active configuration

New Tags

It defines the behavior of the tool towards the elements that do not yet have tags when the tagging operation is started. It is used for incremental tagging operations
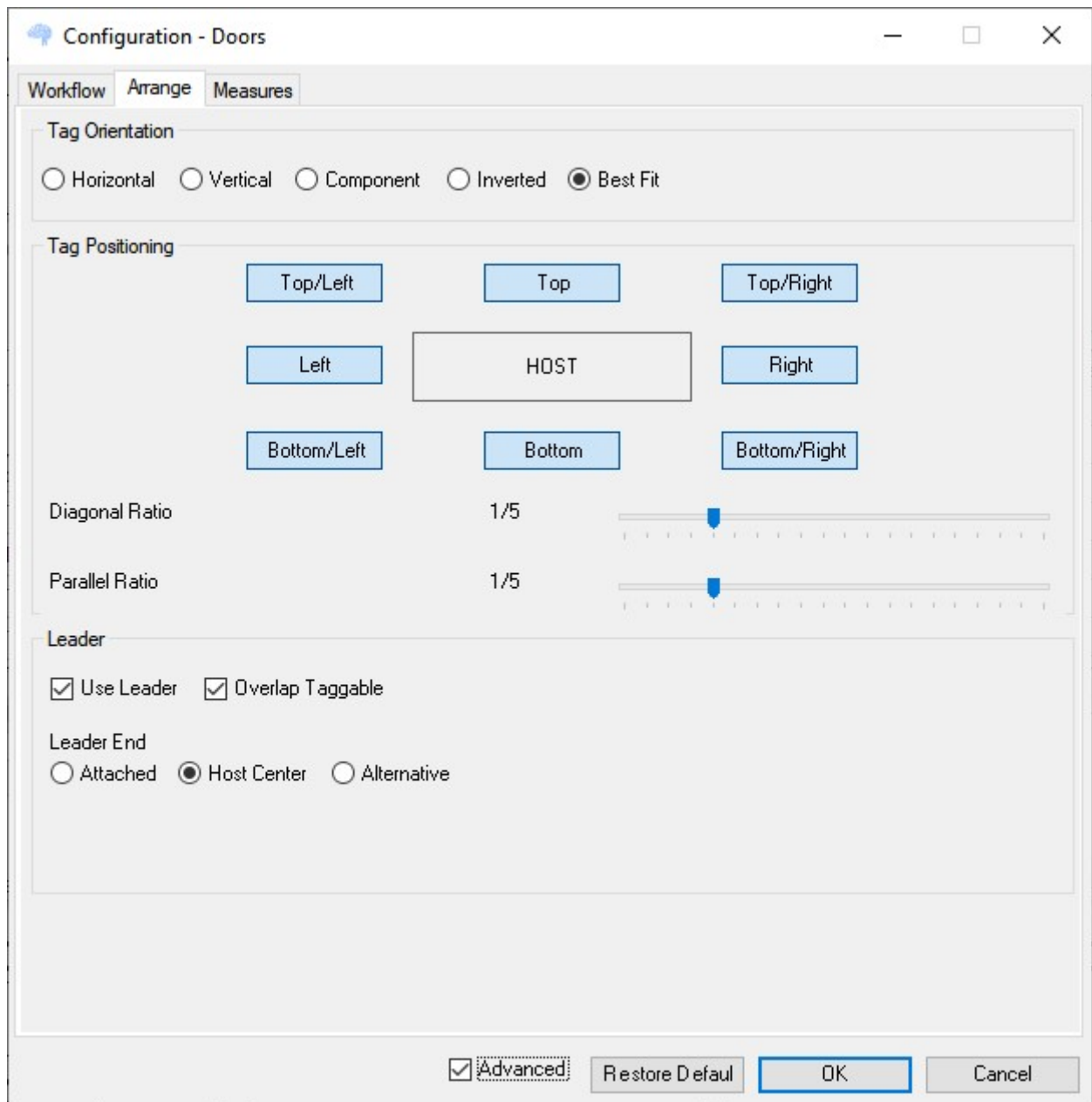
Create

Creates the tag for the element

Arrange

Use the active configuration to place the created tag

'Arrange' Section

Defines the specific parameters for the placement of tags

Tag Orientation

Horizontal/Vertical
All tags follow the indicated orientation, regardless of location or orientation of the host element

Component
The tag follows the orientation (Horizontal/Vertical) of the element to which it is connected

Inverted (Component)
The tag is placed in reverse orientation with respect to the element to which it is connected

Best Fit
Rotates the tag to optimize space occupancy. Slower than the previous ones, but it allows the achievement of higher fitness values

Tag Positioning

It is used to enable the positions used in attempts to place the tag with respect to the host element

Top/Bottom/Left/Right and diagonals

The buttons enable/disable the corresponding position

Diagonal Ratio - ADVANCED

It is enabled only if at least one of the diagonal positions is active. Defines the preference of orthogonal positions with respect to diagonal ones. Ranges from 1/1 (same priority) to 1/10 (diagonal is preferred at 90%)

Parallel Ratio - ADVANCED

It is enabled only if at least one of the orthogonal positions is active. Defines the preference of positions parallel to the host element with respect to orthogonal ones. Ranges from 1/1 (same priority) to 1/10 (orthogonal is preferred at 90%)

Leader

Defines the management of the leader line that links the tag to the host

Use Leader

Enables/disables the leader line management

Overlap Taggable

If selected, it allows the leader to overlap with tags that are different from his own host element

Leader End

Defines how the leader is connected to the host element

Attached

Leader line is created following the standard Revit methods

Host Center

The leader line is connected to the center of the host element

Alternative

The leader line is connected orthogonally to the nearest side of the host element. Especially useful for spatial type elements (Rooms / Spaces)

'Measures' Section

Configures the distance and area measurements used to create and place tags.

Distance

Minimum Offset

Starting distance for tag placement attempts against the host. Fitness is calculated with respect to this parameter; the more the final distance will be near this minimum distance, the higher the fitness will be

Maximum Offset (Minimum Distance) - ADVANCED

It is used only for the 'Minimum Distance' method (see). Defines the maximum distance for tag placement attempts against the host

Maximum Offset (First Fixed) - ADVANCED

It is used only for the 'First Fixed' method (see). Defines the maximum distance for tag placement attempts against the host. It has a higher value than the homologous parameter related to the 'Minimum Distance' method and allows to reach a placement percentage close to 100%, although with less fitness

Offset Increment - ADVANCED

Defines the distance increase from the host element for each placement attempt and therefore consequently affects the number of attempts themselves

Warning: Using low values leads to greater precision but at the cost of potentially much longer times

Translate Increment - ADVANCED

It defines the lateral movement along the host element for each placement attempt and therefore consequently affects the number of attempts themselves

Warning: Using low values leads to greater precision but at the cost of potentially much longer times

Area

Configure the management of the size of the elements and their tags
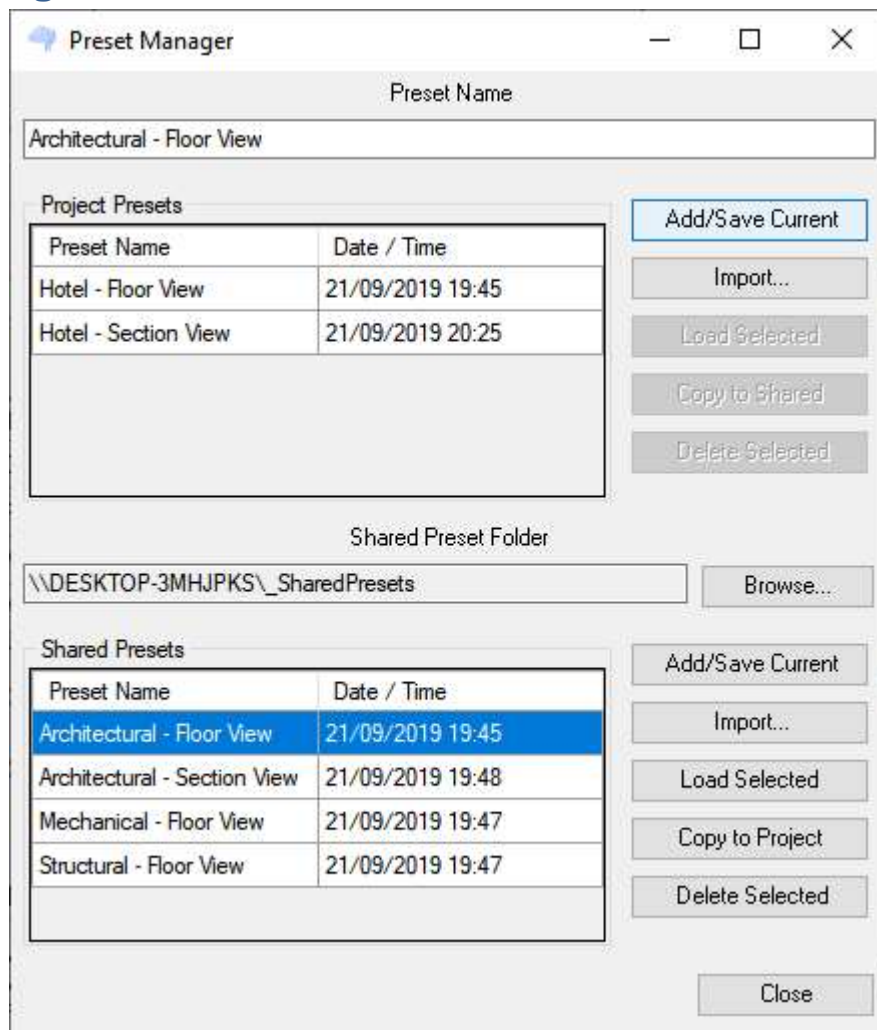
Minimum Area

Area below which the element, although belonging to an enabled category, is not tagged

Overlap Tolerance

If positive, it allows the tags to slightly overlap each other, taking advantage of the empty space around the text present in the tags, allowing you to place more tags. To be used in very crowded areas of elements

If negative, on the contrary, it further separates the tags between them to obtain an aesthetically better result; recommended for areas with a limited number of items

"Preset Manager" Window

It allows to quickly define the set of configuration settings to be used for the tagging operations of the various types of view. These operations are normally performed by the project manager (or studio manager for shared presets).
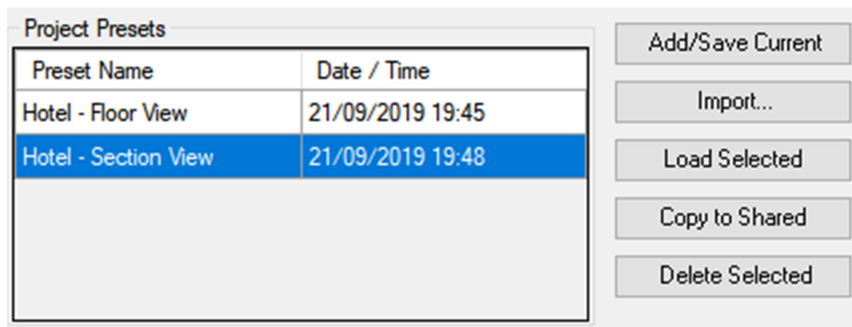
The presets are divided into two types:

- Project presets
  They are related to the current model and are stored in a filesystem folder adjacent to the model itself and therefore accessible to anyone working with it

- Shared presets
  They are generic presets and are stored in a filesystem folder accessible from all workstations, to be used as they are or possibly adapted to the current project

Preset Name

Displays the currently selected preset and allows entering a new name to save the preset.

"Project Presets" Panel

Displays the multi-selection list of project presets, with the name and date/time of creation or last save.

By double clicking on an entry in the list, the "Load Selected" command will be invoked (see)

Add/Save Current
Adds the currently loaded configuration to the list, giving it the name specified in the "Preset Name" box. If this configuration is already present, it will be updated with the new parameters after a confirmation request

Import
Allows you to add, with multiple selection, presets found in the filesystem

Load Selected
Active only if a single item is selected in the list. The corresponding preset will be loaded and the window will be closed.

Copy to Shared
Active only if at least one entry is selected in the list. The corresponding presets will be loaded into the "Shared Presets" list upon confirmation request to replace any existing presets
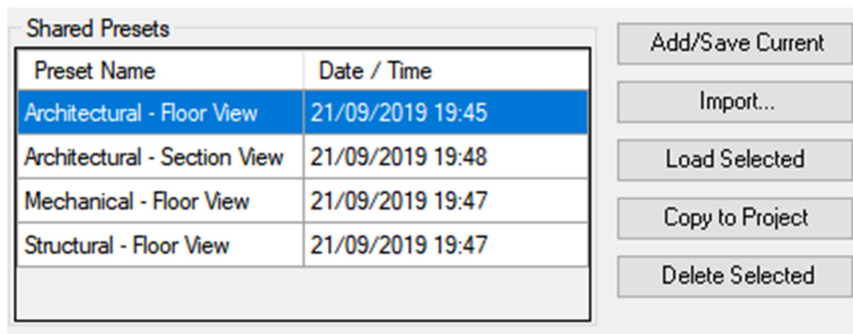
Delete Selected
Active only if at least one entry is selected in the list. The corresponding presets will be permanently deleted

Shared Presets Folder

Allows you to specify the folder where the shared presets are stored; by pressing the "Browse" button you can browse the filesystem and select this folder.

"Shared Presets" Panel

Similar to the previous panel, displays the multi-selection list of project presets, with the name and date/time of creation or last save.

By double clicking on an entry in the list, the "Load Selected" command will be invoked (see)

Add/Save Current

Adds the currently loaded configuration to the list, giving it the name specified in the "Preset Name" box. If this configuration is already present, it will be updated with the new parameters after a confirmation request

Import

Allows you to add, with multiple selection, presets found in the filesystem

Load Selected

Active only if a single item is selected in the list. The corresponding preset will be loaded and the window will be closed.

Copy to Project

Active only if at least one entry is selected in the list. The corresponding presets will be loaded into the "Project Presets" list upon confirmation request to replace any existing presets

Delete Selected

Active only if at least one entry is selected in the list. The corresponding presets will be permanently deleted