AVAIL™

Revit Tag Generator Add-in:

Harvesting Revit Data
in AVAIL™

Reference &
Instruction Guide

Revit Tag Generator Add-in:

Harvesting Revit Tags in AVAIL™

Reference & Setup Guide

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Overview

This is an add-in for the AVAIL indexing process in order to extract tag data from a Revit file. During the indexing process, AVAIL will pass a file path to a registered add-in and return a set of pre-structured tags associated with a Revit file.

Supported File Types

This add-in focuses primarily on extracting metadata from Revit Family files, but can extract basic tags for other types of Revit files. The types of files that this add-in can extract are:

- **Revit Family** (.rfa)
- **Revit Project** (.rvt)
- **Revit Project Template** (.rte)
- **Revit Family Template** (.rft)
- **Revit Family Type Catalog** (.txt)
  - If a type catalog is found, this add-in will apply the same tags as its corresponding family file
- **Backup Revit Files**
  - This add-in will identify backups for .rfa, .rvt, .rte, and .rft files based on Revit's standard practice of applying four digits before the file extension as it saves backup files (Ex: "MyFamily.0001.rfa")

Key Configuration

A user has the option to set additional keys via a configuration file titled **RevitTagGenerator.xml.** This file is located in the same directory as the add-in install location (`C:\ProgramData\Avail\addins`). The key configuration file is a simple, XML file that specifies what keys to monitor when the indexing process encounters a Revit-supported file. NOTE: If you apply any change to the key configuration, you will need to save and restart AVAIL before those changes can take effect.

Predefined Keys

The keys defined in this configuration file only specifies what types of parameters to monitor as it parses through the family file's metadata. Due to the potential high quantity of tags that can be extracted from a Revit family file, this add-in is initially configured to only extract a predefined set of keys.
Some keys that are defined may not be applied if a key is irrelevant to the family file or simply does not exist in the file's metadata (e.g. A "Voltage" key is not a parameter that would be available for a Door family).

This file is initially configured with a predefined set of keys:

- **Revit Version**
    - The saved version of Revit of the file.
    - Example tag values: *Revit 2017*, *Revit 2018*
- **Revit Category**
    - The categorization of the family in the Revit Project Browser when loaded into a project.
    - Example tag values: *Casework*, *Doors*, etc.
- **Host**
    - The type of element that a family is configured to attach to when it is placed within a model in Revit (e.g. a Door family is hosted on a Wall)
    - Possible tag values: *Wall*, *Floor*, *Ceiling*, *Face*, *Roof*, or *None* (default)
- **File Type**
    - The type of Revit file
    - Possible tag values: *Family*, *Project*, *Family Template*, *Project Template*, *Type Catalog*, or *Backup*

The following are some example keys that could be included:

- **Assembly Code**
- **Load Classification**
- **MasterFormat**

- **OmniClass Number**
- **OmniClass Title**

Specifying Keys

This indexing plugin allows can be configured with any number of keys to monitor whenever it encounters a parameter defined within a Revit file. Below is a simplified version of what the RevitTagGenerator.xml file initially looks like (see sample at the end of this document for full version of the initial RevitTagGenerator.xml file):

```xml
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <!--Define what keys to monitor here-->
  <keys>
    <key>Revit Version</key>
    <key>Revit Category</key>
    <key>Host</key>
    <key>File Type</key>
  </keys>
</configuration>
```

To add a new key to monitor, add the value surrounded by the `<key>` element within the `<keys>` collection:

```xml
<key>OmniClass Title</key>
```

You can also extract other parameters from a Revit Family file, such as family type parameters (e.g. *Width*, *Voltage*). To include it as a key to monitor, simply add the the value surrounded by the `<key>` attribute:

```xml
<key>Voltage</key>
```

Key Translations

Another feature in regards to a key defined in the configuration file are **translations**. This is an optional attribute on the `<key>` element and allows you to automatically rename a key it encounters as the tags are being generated. For example, although "Revit Category" is a key that can be extracted, suppose that you prefer it to display as "Family Category" instead. To let the add-in know to perform the translation, add the `translations=""`

attribute to the key shown below:

```
<key translations="Revit Category">Family Category</key>
```

Note that the key that is defined within the `translations` attribute does not need to be defined in a separate `<key>` element. In other words, the translation attribute "Revit Category" in the example above is an implicit key definition, so the user will not need to include `<key>Revit Category</key>` in the configuration.

Translations can be used to generate tags for family type parameters with a more human-readable key. For example, "w" is a common family type parameter in a Revit family file that represents a width variable. If you prefer to export this "w" value as a tag, but rename it to "Width", then the translation added to the configuration file would be:

```
<key translations="w">Width</key>
```

Multiple Key Translations

To include multiple translations, add each value in the translations attribute separated by a comma:

```
<key translations="Rating Voltage,Connector Voltage">Voltage</key>
```

You can also specify a translation with a **wildcard**, or *****. If a user wants to extract all parameters that end with "Voltage" with the "Voltage" key, then the translation is:

```
<key translations="*Voltage">Voltage</key>
```

Support

Have a question?
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