In The Name of Allah, The Most Merciful, The Ever Merciful

CLASHAMMO DYNAMO SCRIPT USER GUIDE

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Allah's is the praise and peace & blessings be upon His messenger

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Introduction

Clashes detected by Revit or Navisworks do not provide a visual presentation where the clash has actually occurred, making it harder to find the clash from the location provided by the data. Hence we need a visual presentation to locate the clash where it occurred, and create a database of the resolution of the clash.

This Dynamo script is based on the custom Revit Family named "Clash Pointer", the script detects the points provided by Navisworks and places the Family "Clash Pointer" on the points, the user then just has to select the Family and enter the relevant data. When the user sets the parameter "Clash_Resolved" to "Yes" then the Clash Pointer will cease to display.

Clash Pointer Revit Family

Clash Pointer Revit Family is based on two geometries, one is the sphere, second is the pointer. The pointer geometry points towards the exact location where the clash is detected by Navisworks, the sphere geometry on the other hand is of radius 10', the sphere is created to direct the user to the position of clash from various views with ease.

Once the clash is resolved, the Clash Pointer will auto hide and will not disturb the Views.
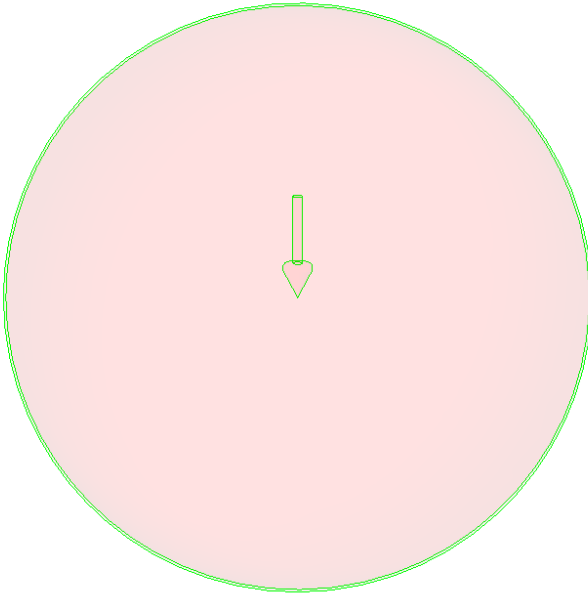
Parameters:

Clash Pointer Parameters work with the Shared Parameters.

Following are the Shared Parameters associated with the Clash Pointer Family under the group name "Clash_Detection":

1. Clash_Comment
2. Clash_Resolved
3. Clash_Date_Found
4. Clash_Date_Resolved
5. Clash_Priority
6. Clash_Assigned_By
7. Clash_Resolved_By
8. Clash_Set

Clash Priorities should vary from 1 to 3 Numeric values only.

1: High Priority

2: Medium Priority

3: Low Priority

Clash Set should have an alphabetical naming convention consisting capital letters only i.e. A to Z, after exhaustion start [Alphabetical Order][Alphabetical Order] AA, AB, AC …… AZ and so on.

Clash Pointer is Generic Models Family Type and utilizes the parameter "Type Comment" with the value: "Clash_Detection_Point", this parameter and value is used to distinguish Clash Pointer from other Generic Models Revit Families.
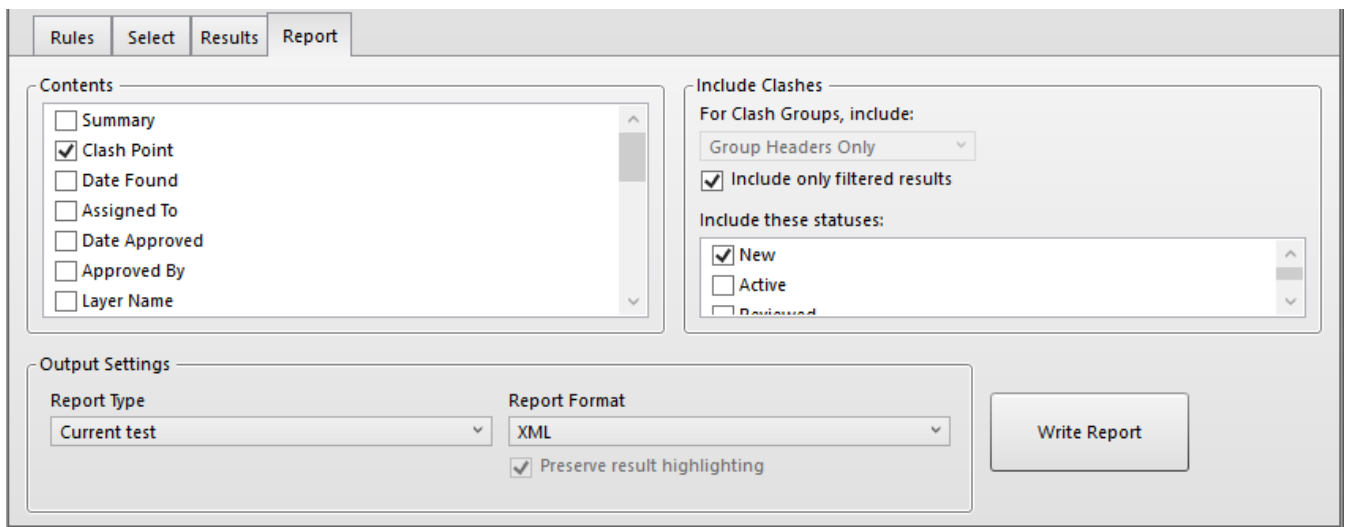
Input: Excel Points Data

Output: Families at Excel Points
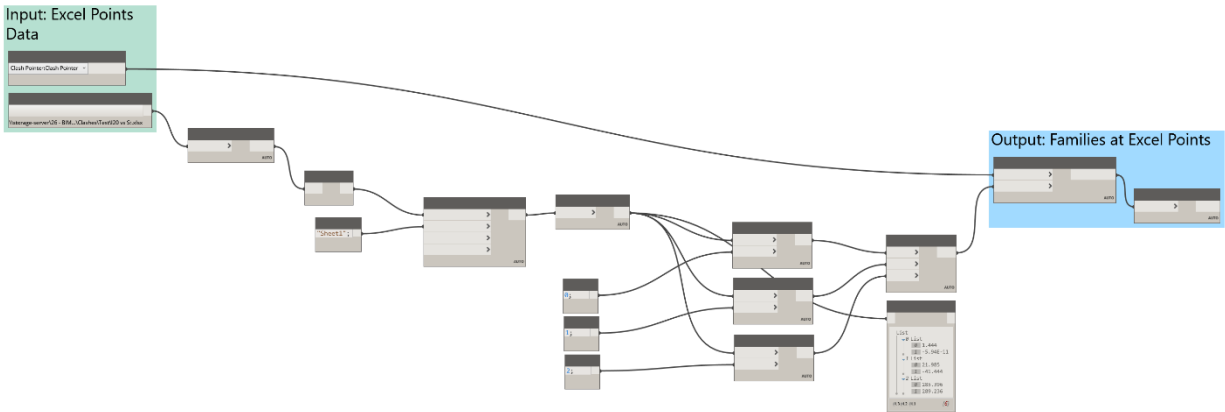
ClashAmmo Script

Usage:

Navisworks Data Convention:

Generate the XML Report Format with only Clash Point Checked in Contents. The XML file should contain the X, Y, Z coordinates when opened in Excel.

|	P	Q	R	
	▼ x	▼ y	▼ z	▼ s
89	125.04	-124.254	-1.766	
b	162.116	65.75	-1.76	
7ce	126.986	-206.305	-1.686	
5b8	187.626	15.715	-1.7	
d55	-244.875	-47.167	-0.335	
f1d	118.298	13.335	-1.574	
2a	-70.812	-72.174	-1.988	
752	165.664	-132.581	-1.175	

Excel Data Convention:

Copy Paste the points or convert the points to X, Y, Z data by any means and save the file as Excel file in xlsx format.

The Columns A, B, and C should only contain data X, Y, and Z coordinates of each clash respectively. Each row should contain the coordinates of only one clash, no row should be empty up to the last row.

	A	B	C
1	125.04	-124.254	-1.766
2	162.116	65.75	-1.76
3	126.986	-206.305	-1.686
4	187.626	15.715	-1.7
5	-244.875	-47.167	-0.335
6	118.298	13.335	-1.574
7	-70.812	-72.174	-1.988
8	165.664	-132.581	-1.175

Procedure:

Run the script in an empty project containing the Clash Pointer Family and all the shared parameters, when the Clash Pointers are placed, select all the Clash Pointers, go to the Level 0' 0" which normally should be Level 1 or the first Level and press Ctrl+C on keyboard to copy, make sure all the Clash Pointers are copied, the project file containing the Clash Pointer Family is provided with the script. Copy the Clash Pointers to the Revit Project where the clashes will be resolved and clashes database will be maintained. Paste by using "Aligned to Selected Levels" method, the Level should be 0' 0" which normally should be Level 1 or the first Level of the project.
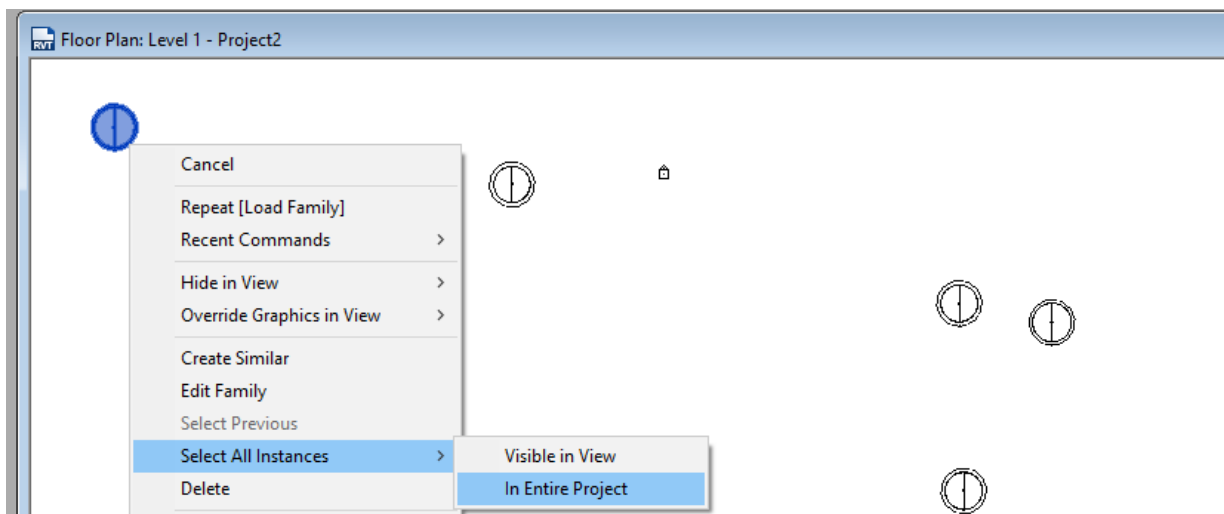

To summarize the procedure, we are copying the Clash Pointers from the Source file where the ClashAmmo script ran to the destination file where the clashes will be resolved and database

maintained. This is required so that the Clash Points are not dependent the Dynamo cache, each time the script is run, it deletes the previously placed Clash Points, which is not an ideal solution. So copy pasting simply deletes the back history of the Clash Pointer Family.

Inputs:

1. Excel file containing the X,Y,Z Locations of the clashes.
2. The Revit Family within a project, which will be used to point towards the clash location, it should only be Clash Pointer Revit Family in this case.
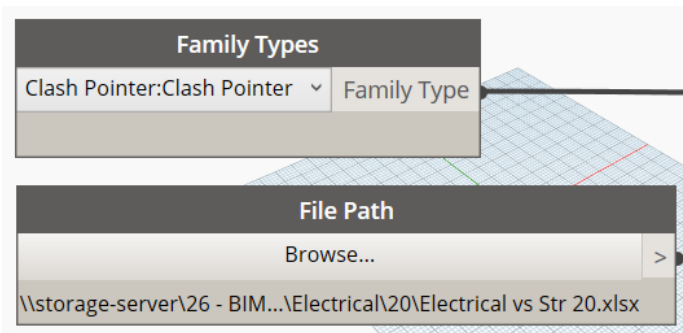
Outputs:

The script will place the Clash Pointers in an open Revit project.

Notes:

The "Shared Parameter" file should be same and point towards only one location, both in the Revit Family of Clash Pointer and the project.

Open the ClashAmmo script after opening the Revit project in which the Clash Pointer Revit Family should be loaded and Clash Pointers placed.

Remember to fill Clash_Assigned_By, Clash_Date_Found, and Clash_Set, it is better to fill these in the empty project.

Project Usage:

Schedule the "Generic Models", filter by "Type Comments" with the value "Clash_Detection_Point"

Schedule: Clash Detection - 005_DCK_40_Storeys_ICT_Kazi_Umar.rvt

\<Clash Detection\>

A	B	C	D	E	F	G	H
Clash_Comment	Clash_Resolved	Clash_Assigned_B	Clash_Date_Found	Clash_Date_Resol	Clash_Priority	Clash_Resolved_By	Clash_Set
	☐	Kazi Umar	24-7-2019				A
	☐	Kazi Umar	24-7-2019				A
	☐	Kazi Umar	24-7-2019				A
	☐	Kazi Umar	24-7-2019				A
	☐	Kazi Umar	24-7-2019				A
	☐	Kazi Umar	24-7-2019				A
	☐	Kazi Umar	24-7-2019				A
	☐	Kazi Umar	24-7-2019				A
	☐	Kazi Umar	24-7-2019				B
	☐	Kazi Umar	24-7-2019				B

Use Isolate View in 3D to Isolate the Clash Area, do this by Isolating the Clash Pointer, it will Isolate the view upto 20' Cube. We hope that this script will be very useful Insha Allah.