

Notes taken by Diane Christoforo during the Revit API panel discussion at AU in Las Vegas November 2018:

Revit ideas is here: <https://forums.autodesk.com/t5/revit-ideas/idb-p/302> Your request may already be there! Vote! Add new ideas! (If you want the API ideas specifically, you can go to this filter: <https://forums.autodesk.com/t5/revit-ideas/idb-p/302/label-name/api>)

Requests

- MEP systems need to keep their properties when demolished
- Easy way to get the wall core structure centerline from the wall type
 - [There is a suggestion in the recording but not in my notes]
- Ceiling API
- Need to tab-select into linked model elements (And in general, APIs need to work with links if we're going to say something is supported!)
- The API documentation is pretty sparse. Can we get more detail and more examples?
- Access to the actual lineweight definitions (ie. lineweight 5 means 8 pixels, for example)
- Expose the group transform
- Rehost a family instance
 - Definitely doesn't work on face based but would like it to work in all cases
 - Also needs to work on links
- Ability to draw on the canvas in front of elements
 - DirectContext3D draws behind elements
- Make DirectContext3D show up in printing
- ReferenceIntersector
 - Make the calculation cached somehow so it's not slow every time you use it on a closed view?
 - Can it work in non-3d views?
- CAD links
 - Get text box notes out of a CAD link from the API
 - Also allow explode via the API
 - Workaround: use dxf file?
- Getting multiple lines when two elements intersect in multiple places
 - [The note taker is not sure what she meant here. Interference check?]
- Key schedules
 - Either need to be able to make key schedules using shared parameters, or need to be able to make internal parameters with the API. [Note taker: it might mean normal where it says internal?]
- Rearrange the parameter list from the API
- [non-API?] When making a section or section box, can we have the new view keep the same design options as the original view?

Bugs?

- Area property seems buggy. A comment that view-specific representations might not show the full picture and to use the model one.
- Changes to MEP fabrication elements do not trigger element updaters
- Revit warnings covering a WPF dialog
 - We recommended writing a failure handler but are not sure if this is an expected problem. It would be expected if you have a modal dialog.
- If you modify the two coordinates of a sloped pipe in the API, then the UI doesn't update properly. [not sure this was written down properly]
- Geometric properties of a solid in structural elements were giving different values depending on the zoom level.

Questions

- How do you know when Revit is in a state where it will respond to an event?
 - You can't definitively know. It's why it has to be an asynchronous mechanism.
- Can you have arguments with ExternalEvents?
 - Yes, although [didn't manage to write the answer down]
- Can I make an OptionsBar via the API?
 - No because Revit is moving away from options bars. We want everything on the ribbon.
- Revit core console, similar to the AutoCAD core console?
 - No, this is not something we're planning to support at this time.
- Why are slow FilteredElementCollectors of variable speed depending on whether the view's been opened or not?
 - [trying to condense a rambling answer] The fast filters don't need all of an element's information to work. The slow filters need everything, and that "everything" is usually first read in when you open a view containing the element. It's a one-time operation. So if the view is already open, the slow filters are faster because that work's already been done.