



BEST PRACTICES COURSE – WEEK 19 – Renovation Projects PART 4 - Renovation by Hotlinking the Existing PLN

Welcome everyone to the ArchiCAD Best Practices training session on renovations and remodels. We'll be looking at an approach that I call hotlinking the existing building into the new project file. And we'll look at where that's useful in versions of ArchiCAD before 15, and also where you might still use it in recent versions of ArchiCAD since 15. [0:00:28]

If I have this project here and we put in some new information, in the previous lesson, we looked at how we could create additional layers for walls, objects, and multiple sets of these three layers. Now I am going to show you a different way to approach this that has some advantages. Let me go and select these. I am going to cut them here. let's save this existing - not too much here - let's go to Documents, and we'll say "Week 19-4", and this is "Existing". [0:01:20]

Now I am going to create a new file, and I will launch a new instance here. in this new instance that will come up, I am going to create the new project. I will reference in this project. When I reference it in, I am going to use a feature in ArchiCAD called 'Hotlinked Modules', which I cover in a separate lesson of the course and certainly refer to it periodically in many different places because it is a very useful tool. I am going to go to the File menu, External Content, Place Hotlinked Module. [0:02:06]

When I place a hotlinked module, it has a master layer here. this reference for annotation is fine for now. We'll leave that alone. But we could create a special layer for this purpose. And it has some other options that I went over in the lesson on hotlinked modules. Basically what I want to do is choose the hotlink from a file, get the existing project here, and I am going to say that it's going to be all stories. I will say OK, and we'll use the original height. This is not relevant to our particular question right now. Let's assume that the project maintains the same story structure, so either of these would work just fine. [0:02:58]

Let me say 'Place Module' here, and we're on the first or ground floor. We are going to bring in the corresponding layers and say OK. And we'll leave it in its original position. So what I now have is a version of that building so to speak. If I select this, you can see that it selects all of the walls at the same time. They have these square handles, which mean that I am selecting the entire building, and I can move it around, although I don't want to. But I can't really edit it, because it's linked in. so now let me paste in a little thing that I had started to draw. [0:03:31]

Let's say that as I started to create this, I realize that I am going to have to demo these walls here. so let me save this project, and we are going to call it "Week 19-4 New Design". So now here is what we are going to be able to do. We can switch using Command+Tab to go back to the existing one here. let me just temporarily paste these in. I need to know where I am going to be making this change here. I will



split this, doing the same thing that I did in the previous lesson of splitting it. Now in this case, I am going to have a single layer that I will use for demo information. So it will be the A-DEMO layer for now.

[0:04:40]

I will go and put these elements onto the demo layer. We will also get rid of these elements. It's going to be confusing for a minute, and then it will get clearer in just a sec. let me put this on here. now we will go the layer A-DEMO and put this back to 1. Now we can see that the building looks the same as it did, because I have the exterior wall layer and the demo layer showing here. they are on the same layer number. Let me save this and let's go to the other one. Right now, if I select this, you can see that it selects all of these together, and in fact, this is only a single wall because I haven't gotten an update on it. [0:05:48]

What I will do now - having saved the other one - I am going to update this reference. If I go to the hotlink manager, we will see that this has been modified, and I am going to update. Now when I update, you can see that this disappears. Why? Because those elements which are visible and part of the other project are on the demo layer. If I turn this on, of course, I can see them. If I turn it off they will go away. How is this different than the way I explained in the previous lesson where we had multiple layer combinations? [0:06:29]

Imagine that in our original project that I was putting in windows here, I have put in a door and interior walls. I am now going to put in some more information into this project that I haven't done before. So this existing project I can start the new design while it has some of the basics down. I don't have to have it complete. Even if I think I have it complete, it's also possible that I might not have it accurate. There might be some things missing or incorrect that I later measure in the field or clarify some issues and things. [0:07:26]

Let's imagine that you have an existing building and you have done some or most of the work to get the existing file, but at some point, something has to be added or maybe a lot has to be added. All I have to do in the existing one is say 'Save', draw the new stuff, and save it. Go to the other one, and go to hotlink manager and update. And you can see all of that new information comes in. so in the existing project, I can keep working on it or possibly have more than one person working on it. [0:08:14]

Let's say that I am working on the new design and someone else in my office is working on just getting the as-built drawings fully put in. so if they share it, and say there was enough information for me to start work on the new design, then I can start work on that new design and they can continue to add to the original one. And periodically, I will update this, and it will have the new, corrected or revised information. The advantage here compared to layers is that you only need one set of extra layers. [0:09:01]



Remember that I just took the two walls that were being demoed and put them on the demo layer. If we assume that the demo elements are going to show - let me put it like this. There are times when you are doing a project, and the existing information only needs to be shown in a limited number of ways. For example, you are not doing a reflected ceiling plan, a structural plan or some other plans for the existing because the building already exists. All you are doing is creating a record of let's say, in the simple case, the floor plan that already exists. [0:09:44]

Maybe you are also going to show the existing elevations, but you have a limited set of drawings. You don't need to have all the variations of a site plan and a ceiling plan and furniture plan for the existing because we are really focusing on what the new project is going to be. So in this file here, we can put in all of the stuff that is going to show up on the output that we need; the existing plan. And we then can focus all of our work on the other project file. [0:10:27]

So for example, if there are some walls that are going to be demoed - remember I had some walls like this that in the other lesson I made them demo - I could make this that. let's put this into a simple wall type and now I believe that I can go and save the cut lines here. I can make them that. that might be something that you do; you don't need to worry about showing all the composites in this. You just need it to be the right thickness and placement and just make it a simple parallel line. Not all of the extra composites. [0:11:08]

Now these elements, all I need to do is make sure they are not on the interior, they are on the demo. Now remember, the demo here is a layer that is showing in this file, because I am focusing on creating an as-built existing drawing, maybe with demo elements dashed; but that is what I prefer. So it's showing the existing conditions with certain things dashed. This is going to be my demo drawing. I save this, and now if I go to the other file and update in the hotlink manager here, we don't see a change visibly here. [0:11:49]

But if I wanted to look at the existing conditions, I could have a layer combination that turns on the demo layer. Then I can see some of the existing stuff that is being removed. And of course, this could have been made dashed as well, if that's what I wanted on the other one. So the advantage here is that two people can work on it, without using teamwork. You can start on your new design without necessarily having the entire existing file done and done perfectly. If there are any revisions or additions to the existing model, then they can be added at any time, and the hotlinked module will update simply by using the hotlink manager. [0:12:43]

In terms of layers, all you really need is the one extra layer for demo to put elements that are going to be demoed. You don't have to have the elements that are going to be demoed, interior walls, equipment, site, and things like that, because we're assuming in this case that the existing project file is only going to have a small number of variations. Maybe a floor plan, either demo or existing. And we don't need to have all the other ones that we would normally see in the construction documents. So it



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simplifies layers and allows the existing project to continue to be developed or corrected, and it's referenced into the new design in a way that will give you control over that. [0:13:46]

Let's see here. if we go back to the floor plan, you can see our new design. We would then, in a way similar to what I demonstrated in lesson 19-1, which was looking at having two separate files - actually, let's compare that right now. In 19-1 I created a new existing design, and then saved a copy of it as a new design. Then I made it the new version. One of the issues there is that if there were changes to that or if it was incomplete, you would have to coordinate two different files. You would have to put the stuff into the first file that needed to be added or changed. [0:14:33]

Then you would have to copy it into the second file. So there are some management issues potentially with that as you change or add information. By hotlinking it in, you are simplifying those management issues. But in the same way that we had with the two separate files, we can go to the layout book to the floor plan here. let me crop this in to have room on the same sheet. Let's drag this over. I can use the Project Chooser, go to Organizer, and we can go and say "from the other file", which happens to be running. [0:15:29]

I can also browse for it here. select this, and take the floor plan. Remember this is in the existing one. I will put this onto the sheet here. and now you can see that this exists here. right now this is the first floor plan. It's now showing the correct information here. let's crop this and update it. I will go and drag this on here. so this is not showing some of the demo stuff here. so I need to go back to this file here and make sure when I show the first floor plan, that I have this layer combination showing the demo information. [0:16:41]

Remember, the assumption here is that the existing project file here it's going to show it as it's built maybe with some of the information dashed, but it's going to show on the floor plan. I will update this here. and that's up to date there. Now having saved it, I can go back to the other file. As soon as this updates, you can see how it now has the existing. And I could name this and change the settings for the drawing on this sheet. And we will say "Existing Ground Floor". So this is now linked to the other file, just like in the simple case of having two separate files. [0:17:36]

But we have the benefit that the plan in general on this sheet - let's close the organizer - this plan here is also going to update. We don't have to manually do that. let's do the extreme case. If I went, "Oh my god! We forgot to put in windows on the back wall here." Or, "We forgot this window too!". I am going to save this and go to the other file. And you see this one will update automatically because it's referencing the running file. If I go to the floor plan here, and go to the hotlink manager and say, "Oops. I better update this." Now we have all that information. [0:18:28]

The idea is that we can make changes in the original file and the new one becomes quite easy to keep in sync. So let's see - I think we've covered the basics of this concept here. let's see. Tom Downer says,



"The renovation filter makes all of this much easier. Glad I have it available." I agree. We will be covering the use of the new ArchiCAD 15 and later renovation tools in the next lesson next week. But let's talk about a couple other things that are necessary here, and when you might use this sort of approach in a later version of ArchiCAD. [0:19:19]

One other thing, as we were working on this design, I sort of drew these walls arbitrarily. Let's say that I decided that - and let me use the marquee to draw this - I will pull this out and let's say I wanted to make it bigger. We'll say 8'. When I did that, you notice that it moved this whole thing. It didn't actually stretch this, because after all, it can't stretch. It's being referenced from outside, so all it can do is drag. So let me do that. we don't want to affect that. [0:20:05]

If I go to the layer, remember the layer for the anno reference? The annotation reference was set up as the master layer for this module? If I lock this, and then do this operation, you can see how it did not move this. That would be one thing is you don't want to make sure you accidentally move the whole building. You want to lock that. the other thing, and you may not want to do this, but certainly it's important to know that if you turn this layer off, all of that information temporarily disappears from the screen. That is the way hotlink modules work is that they have a master layer that controls the visibility of the whole thing. [0:20:52]

Now it's showing. And obviously in this case, I have changed the design. And remember that this was demoed. And maybe this piece of wall should be demoed too, or I should change the demo wall. it's going horizontally. It's going to be a different length; I'm going to remove more of it. So how would I get that information? I would have to get the information back to the existing file to know where it is. I did it 8', so I could figure that out manually. But sometimes you might want to just copy some information from the new design here and go to the other one here and paste. [0:21:39]

Now we can say that this is the demo; this one is the existing to remain. We will pull this back and take this one and extend it. So now we have this. And maybe we should make these - I guess I can't make them dashed without creating a new composite. I won't worry about that. let me save this - actually, let's get rid of this little piece that I brought in as a guide - and save it. Now we can see here is the existing project, but the piece that is going to be removed is actually changed. So now if I go to the other version here and update with the hotlink manager, we are going to see the whole piece of wall has been changed. [0:22:35]

Occasionally, you would have to go and copy some things from the new back to the existing so that you could actually make it easy to change something from existing to remain to demo or vice versa. Possibly something is going to stay that you previously thought you were going to remove. So there is some information back and forth, but the basic controls are available in the method that I described. So let's see if there are any other follow-up questions of this method of hotlinking the project file that is existing



into a separate file that is new and then making some new things as well as some changes, demos.
[0:23:23]

We have a question from Dave Norman, "For small renovation projects, I like to identify existing demo and new elements all on the same floor plan. How do you suggest we do this using the renovation palette?" that is exactly what we do in the new system. So we'll be looking at that in the next lesson. Okay. before we finish up, let's talk about when we would use this in ArchiCAD 15 and later, since you do have the renovation palette. When would you reference this in? [0:24:06]

If you have a building that you want to work on separately, let's look at the ways we use hotlinked modules in general, which I have covered in a separate lesson. You can have a building that you reference into another project file. Hotlinked module can be something that is repetitive, like unit plans, or maybe you have a condo and have certain units that are repeated; and when you change the design they all update. So that's one use of it. Maybe a stairwell or stair design that is put in more than one time in a building. [0:24:48]

Those are repeated instances. We can also use hotlinked modules to put an entire building into a site plan. Maybe you have several buildings, each one maintained in a separate file, but then linked into a site plan. Or one building is worked on in one file and another building in another file. Each linked into each other's plan, so that you can do some coordinated design, but most of the time work on one building or the other. This would be a way to bypass the Teamwork setup in ArchiCAD just maintain the two separate buildings into two separate files. [0:25:37]

In the same way, if you did want to use this hotlink concept for an addition or remodel project, there are some cases where it is advantageous to work on it in a separate file. If you don't get into the BIM server and Teamwork, even though that is an elegant solution, sometimes it may be a good idea to have one person work on one file and it be referenced in, and have another person working on the other file. This potentially could be a workflow you might consider. [0:26:19]

I can't think right off the top where we might use this in relationship to remodels. If we have multiple phasing; phase 1, phase 2, phase 3, this again might be another way to work around that limitation. The renovation palette, which only allows essentially two phases, existing and new, with the demo being a category of elements that are removed between the two phases. With a hotlink situation, we can definitely include multiple phasing. [0:27:00]

Okay. I think this concludes lesson 19-4 on using a hotlinked module for the existing project as the basis of your new design file; and going back and forth as needed between those two project files. Please add your comments and questions to the page down below. This has been Eric Bobrow, thanks for watching.

[END OF AUDIO 0:27:34]