



This Month:

Management of Central Files (part 1 of 2)

Welcome to **INFOCUS**, C3 Consulting Solution's Monthly Newsletter. This month, we're continuing our look at Worksharing, focusing specifically on management of Central Files.

Last month we explored how to determine worksets once they have been enabled within your project. We also established the difference between *Worksets* and *Worksharing*, the latter of which represents a more appropriate term for describing the process involved. Working within teams, we share responsibilities and tasks in order to achieve a common goal. How successful we are at achieving that goal will depend on our methodology, skill, commitment, knowledge and communication. Worksharing within Autodesk Revit® is no different.

We established the principles of worksharing in our June Edition of INFOCUS. To recap briefly, a project file resides in a central network location, and this represents the master copy of the file. This is known as the *Central File*. Each Revit user will have a duplicate of this file on their local computer, and this file is known as the *Local File*. Revit manages the process whereby team members are given temporary ownership of parts of the file in order to make whatever edits are required. Individuals can save work to their local file and/or to the central file, at which point Revit reconciles their changes with the rest of the model and the changes made by other team members.

To keep the project running smoothly, it is important to establish the methodology early (establishing processes and standards). Inconsistency in this environment is perhaps the biggest no-no of all. We could discuss this point at length, but for now let's just take it as a given. The following steps will hopefully be helpful and alert you to some of the dangers that lay in wait for the unwitting.

Naming Convention

First, establish a naming convention for your files. Note: there will likely be far fewer files used while completing your project using Revit than if you were using a 'traditional' CAD system.

A suggested naming convention for Revit files (that employ worksharing) is as follows:

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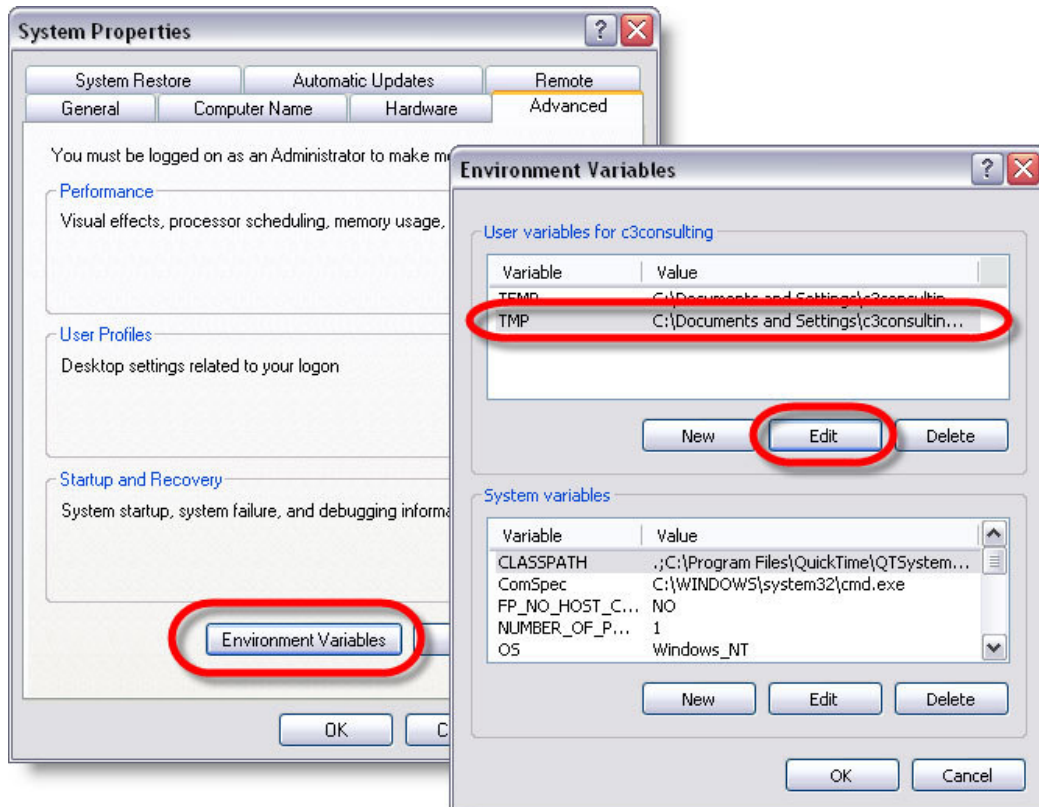
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Central file name: *JOBNUMBER-central.rvt*

This may reside at any network location where all users are permitted to write to the file. Preferably the network has a high bandwidth, due to the large volumes of data that will be transferred across the network.

Local file name: *JOBNUMBER-username.rvt*

This should reside on the local computer, for optimum processing power between the program and the file. By default, Revit uses the TMP environment variable for temporary file space, so it's also important to ensure that the corresponding location has plenty of space available. To determine or edit this location, right-click on My Computer, go to Properties, Advanced Tab, Environment Variables.



If employed, this naming convention clearly distinguishes one file from another. You may wish to use a variation on this theme that best suits the needs of your project. For example, you may wish to add the project phase as a part of the filename (e.g. *JOBNUMBER-SD-central.rvt* for Schematic Design phase). Very large projects may employ a series of central files, each of which are linked to another project file which contains the entire project. In this case, greater clarity in the names would be required to distinguish one file from another.

Creating Local Files

There are two primary ways to create local files. The first is:

- Open the central file directly

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- Go to the File menu, and select *Save As* (This must be done *without* using the *Make this file Central after save* option.)
- Determine a new (local) file location and hit *Save*

By entering in a new location and filename, the new file will be created as a local file, with a dialog to the central file already established.

This method can be time consuming and carries with it an element of risk. Even with a disciplined commitment to procedures, it is possible for someone to accidentally forget to perform a *Save As* in order to create their local file. As a simple rule, users should not directly open the central file – that way no one else can be prohibited from saving their changes.

An alternative method of creating local files is to copy the central file to a local location. This new file should be renamed as soon as it has been created (to distinguish it from the central file). Since the central file has its own location recorded within itself, Revit will determine that its new location differs from where it should be. Upon this copied file being opened, a message will notify the user of what has occurred, and offer information to the user to clarify the situation.

If using this latter methodology, (i.e. wishing to use the new file as a local copy) this dialog appears only on the first occasion that a new local file is opened, and users can dismiss it without further concern.

TIP:

Opening a local file does not automatically load the latest changes from the central file. This is entirely justified, as it may not be appreciated if you are working in a state of 'temporary isolation' where you specifically don't want your work impacted without your approval. You must therefore ask Revit to do this (via File menu->Reload Latest).

Even this process of copying the central file to a local location (and then renaming it) can be tedious, and still carries with it some risk that it won't be completed correctly (e.g. incorrect location or filename). However, this process can be automated. For example, using a simple batch (*.BAT) file can be extremely effective (though more advanced techniques might be employed). Used whenever required, such a tool should perform the following tasks:

- Move any existing local files from their current folder to an archive folder.
- Copy the central file from its current location to a pre-designated local folder.
- Rename the central file according to the local user's Revit username (this is typically the same as the user's login username).

Note: there may be other tasks you can think of beyond this list.

Saving To Central

This process is sometimes known by its abbreviated form 'STC'. While it could be most succinctly described as a synchronisation process, it is important to understand what it entails.

Firstly, any changes you've made to your local file are written to the Central file. Once they arrive, Revit reconciles those changes with the rest of the project,

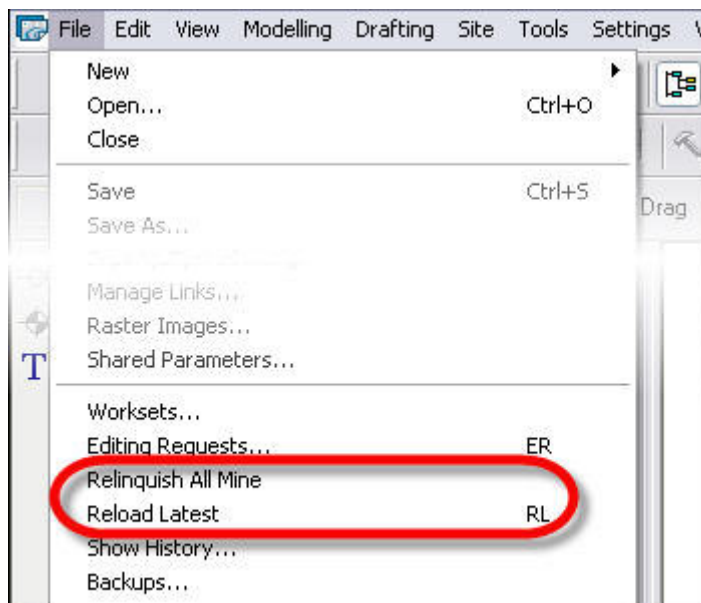
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which may include recent changes made by other users to the objects they have borrowed. Assuming this is completed without complication, Revit will then send back to your local file any changes to the project made by other users. Once this is completed, your local file will be synchronised with the central file and the STC will be complete.

If you have any worksets checked out in your name, the entire workset must be written back to the central file, regardless of whether you've changed one or ten thousand elements. As worksets can contain a significant amount of data, this sometimes contributes to longer Save-To-Central (STC) times. Therefore to keep STC times to a minimum, don't check out worksets unless absolutely necessary.

If you wish to update your local file with changes that have been published to the Central file by other users, without your changes being published to the Central File, you can reload the latest changes (a one-way transaction) via *Reload Latest* from the File menu. Revit will then locally reconcile these changes for you.



Relinquishing elements

During the course of project work, it is not unusual for another team member to need to make changes to one or more elements that you already have borrowed out in your name. Upon an attempt to edit such an element, they will be prompted with a message indicating why they can't proceed and who has ownership of the element(s). So long as you maintain ownership, the other user will not be able to make their desired changes.

Therefore to keep the project moving, you should periodically relinquish elements that you have finished editing and therefore no longer need ownership of. To do this, go to the File menu, and select *Relinquish All Mine* (as per the image above). This will reduce the number of occasions on which other team members will have to ask you to relinquish elements or worksets you have in your name.

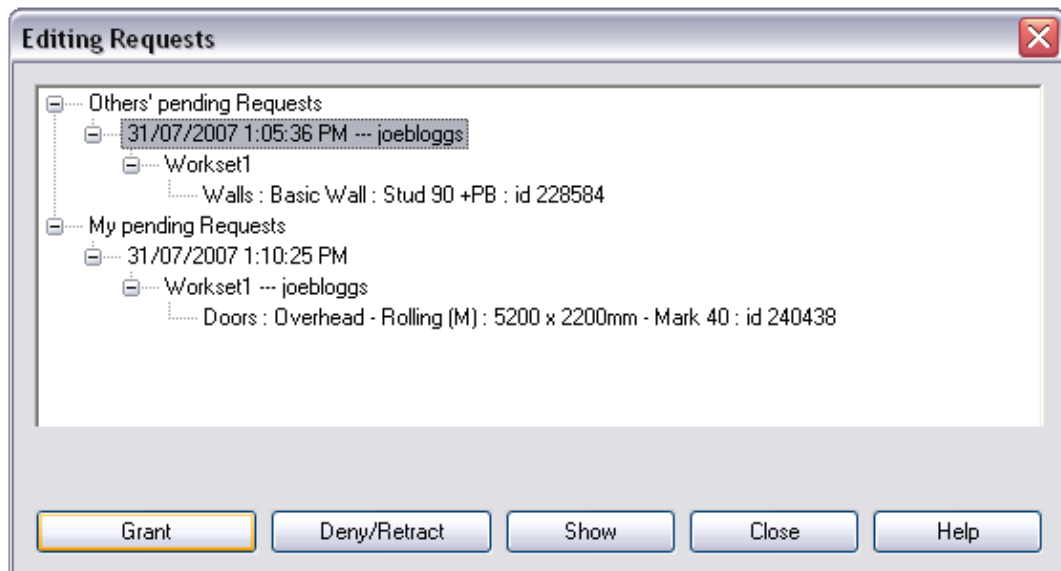
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Editing Requests

Theoretically, this issue has been addressed, and will allow you to submit a request to the current owner of an element (or elements) to relinquish them and allow you access. Once they receive your request, they can grant or deny it. The problem is, however, that they don't receive the request that you submit. Revit doesn't notify them. They have to check their editing requests (from the File menu) to see what requests have been submitted.



The editing requests dialog (available via the File menu).

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Presumably, then, the only thing missing or not working is a built-in instant messaging system. The absence of this is frustrating, and it is thought by some that the reason for it may relate to security issues with Instant Messaging systems on some networks.

Nevertheless, if this problem is acknowledged by project teams at the outset, then no user should be waiting unnecessarily on responses from other users. Instead, they should let each other know when they've submitted a request OR simply make the request without using the request system at all.

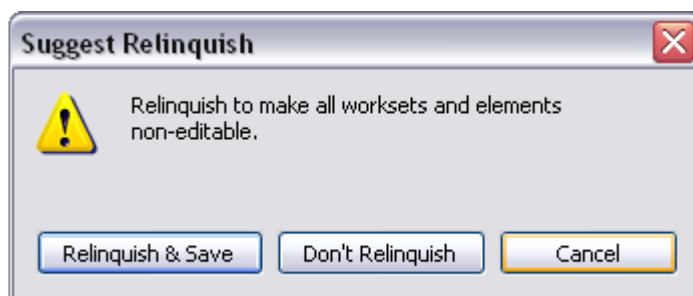
The need to facilitate easy communication between users does suggest an advantage in keeping the Revit project team situated closely together. It's easy to turn one's head and *verbally* ask someone to relinquish what they've borrowed. People are much more likely to use this form of communication rather than to bother to type an email or make a phone call. Keeping the team(s) physically together has other added benefits, such as improved communication within the team generally, leading to yet more benefits like improved coordination of the project model.

If you don't have the luxury of this option, consider using a third party Instant Messaging (IM) system, such as Yahoo Messenger, MSN Messenger, Skype, ICQ, Trillian or others. It would be wise to research the security issues (if any) of each package beforehand, however (beyond the scope of this newsletter).

Always Relinquish

One cardinal rule that should be adhered to is to ensure that all of your borrowed elements are relinquished before you leave the office. The reason is simple – if you are not present, you can't then relinquish elements that others need to edit. The net result is that you may hold up work on the project. If you've left the office at the end of the day, and you're returning the next morning, perhaps this isn't so prohibitive. However, suppose you fall ill overnight and you don't return to the office! How long will you be ill for? If you were to forget to relinquish before you leave to go on holidays, it could be weeks before you return, all the while preventing work from continuing!

While there are ways to overcome this problem if it does occur (there would have to be, wouldn't you think?), the solution may involve loss of data, which will usually be from work you've done. As such, take it as a rule, you should always relinquish before you leave the office. Thankfully, Revit will always remind you to do so before you close your local file. Therefore 'I forgot' really isn't a valid excuse.

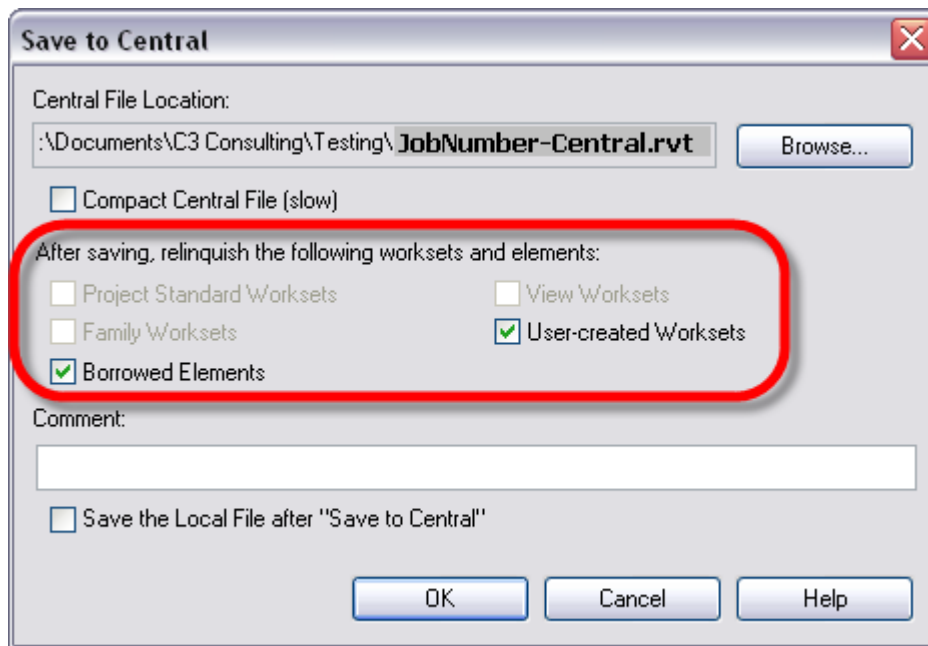


Aside from electing to relinquish your borrowed elements on request (via File menu->*Relinquish All Mine*), you also have the option to do so whenever you

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Save to Central. The STC dialog (accessed only from the File menu) provides this:



You can check the boxes to elect to relinquish the respective elements or worksets. If none of the boxes *can* be checked, then you haven't borrowed any of the respective items.

Summary

As a quick recap for this month, as part of your best practise approach to worksharing, remember to:

- Establish a simple but effective file naming convention
- Establish procedures for creation of local files from the central (consider automating this)
- Relinquish borrowed elements or worksets regularly
- Don't borrow worksets unless absolutely necessary

Next month we'll look deeper into some more issues you might encounter when managing worksharing, such as what to do if your central file becomes corrupted, or if your local file loses its link back to the central file.

Next month: Management of Central Files (part 2 of 2)

If you have any feedback about this newsletter, or things you'd like to contribute, please email the editor at infocus@c3consulting.com.au

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