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Organized Chaos: Keeping Standards with Flexibility

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CM33-1 Learn techniques for keeping the standards up to date and locked down while allowing users freedom to customize their environment. We will address techniques that can work in all environments, from a small two-person office to a large multidiscipline organization using multiple products across multiple offices.

Topics Covered

- * Using tools like DFS to standardize environments in both small and large firms
- * Using the network (LAN) for standardization. What files to use and where to place them
- * Folder and file permission considerations
- * Providing users with access to standards while maintaining flexibility of their work environment
- * Using the WAN and DFS in a large organization

About the Speaker:

Skip graduated with an Associates degree in Drafting and Design Technologies in 1986. He has 18 years of experience using AutoCAD® and numerous other products in the civil engineering and surveying fields. Currently, Skip is responsible for all IT tasks for two offices of a 12-office firm, as well as responsibility for Autodesk product deployment, training, and support for 135 users in the company's 12 offices across 4 states.

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Your challenge, should you accept it is to find a way to keep the standards standard and still allow the users an opportunity to create their own environment and be able to take that environment with them to other machines or locations. My challenge, which I have already accepted, is to help you with some suggestions on how to do just that. Hopefully, during our time together, we will all learn something new to help us do the job of maintaining CAD Standards more efficiently.

What?

The first thing we need to do is determine what we want to make available from the server for everybody. What files are ideal for being put on the network?

I would suggest that any files that need to be kept consistent between users would make good candidates.

Examples:

- Drawing template files (.dwt)
- Standards Template files (.dws)
- Plot styles (.ctb and/or .stb)
- Plotters (.pc3)
- Plotter Drivers (.hdi, .dll, .drc)
- Fonts (.shx)
- Custom Menus (.mn*)
- Custom Tool Palettes (.atc)
- Lisp/VBA/ARX
- Profiles (.arg)
- Short Cuts (for the desktop)
- Blocks (.dwg)
- Details (.dwg)
- Project Specific Standards (all the above as necessary)
- Client Specific Standards (all the above as necessary)

Application Specific Examples:

Land Desktop

- Prototypes
- Contour Styles
- Label Styles
- Menu Palettes
- Description Key Files
- Figure Preference Libraries

Building Systems

Mechanical Desktop

Architectural Desktop

Obviously this list is not all inclusive but it does give us a pretty good start.

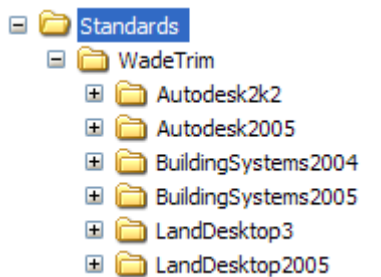
Where?

Well, now we have a nice list of stuff that we need to put somewhere. How do we keep the product specific items separate from the items that cross product lines? We also need to address the issue of multiple platforms.

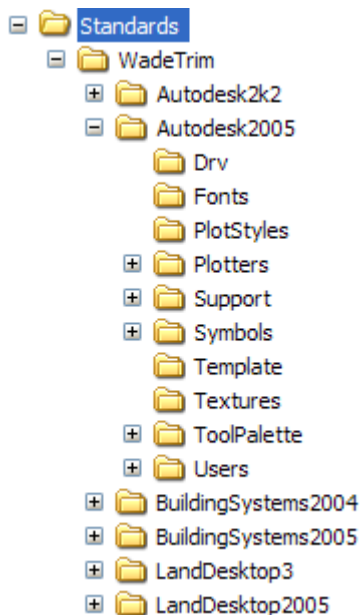
I would suggest the following guidelines:

- Keep all items that cross the product line for a specific version in a common folder that references the version number. For example use an Autodesk 2005 folder for all items that will work with all 2005 based products.
- Keep all items that are product specific in a product specific folder. For example, if you use Land Desktop 2005, keep all LD2005 items in a LandDesktop2005 folder.
- Always use the same folder structure that Autodesk uses. This makes life a lot easier when setting up profiles.

A basic folder structure might look something like this.

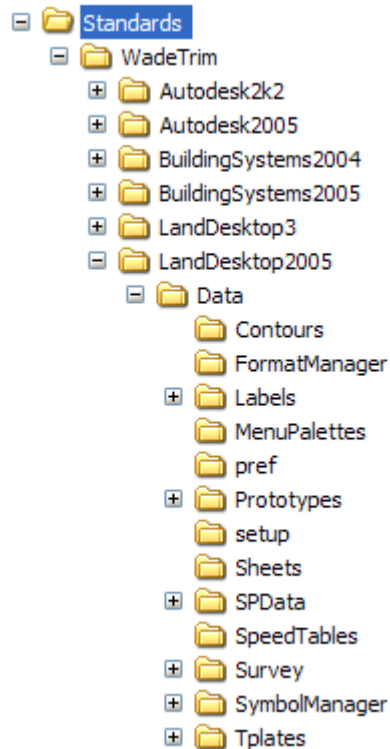


And if we expand the Autodesk2005 folder we might see this.



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If we take a peek at the LandDesktop2005 folder we might see this.



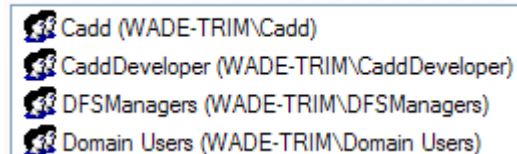
Permissions

Permissions need to be thought out as you go through the process of moving files to the server. In many cases, we just want to make certain files read only and allow write access to the folder that those files are in. In other cases, we might want to make the entire folder read only. For example let's look at the Plotters folder. What flexibility do you want to allow the users to have? Do you want them to be able to create their own .pc3 files? Do you want them to be able to modify the standard .pc3 files? I think we would want to make all of the standard .pc3 files read only to the users. However if you want to allow them to create their own custom .pc3 files so everyone can have access to them you will need to allow write access to the Plotters folder. In our case, the read only permission is applied at the folder level which limits the user's ability to create .pc3 files.

There are situations that a file that you want shared and would like to place on the server needs change rights for one of the vertical products to work. As an example, if we look at the fig_pref.db file for Land Desktop figure creation. This file appears to need change access for figure functionality to work correctly. Permission issues will arise throughout whatever structure you put in place, it will be up to you to decide how you want to address each situation as it arises.

One suggestion that I would give is that you create a cad managers group or cad developers group with a select number of individuals that has change access to the standard files so changes can be made if necessary and you are not around. We use the follow groups for permissions.

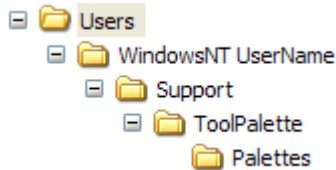
Group or user names:



The Cadd group consists of all the cad users. The CaddDeveloper group consists of the cad development team. The DFS Managers consist of the DFS management team (more about DFS soon).

User Work Environment Flexibility

So the question is, how do we allow our power users to change their work environment and yet still maintain the standard? The answer is to provide a user folder for each user out on the server. This can be a location where the user can store any custom menus or other customization and not only have access to it, but get it backed up on a regular basis. The folder could look like this.



Under the Users folder would be a list of user names that would contain all of your users. An example list of files that can be stored here are.

Acad.pgp

User.mn*

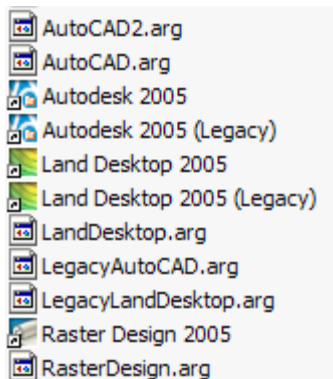
Custom tool palettes

Custom anything in reality

Permissions can be applied that all cad users have read access to all other cad user folders and the cad manager and the specific user have change access available to them.

How do I access all these folders?

Accessing the location of all these files is done with custom profiles (.arg) and custom icons that call the profiles. Following is a list of the custom icons and profiles that we store on the server.



The icons can be copied to the workstation desktop during the install process if desired or they can be left out on the server to be accessed by users. In order to call the specific profile desired use the /p switch in the target line of the icon. For example to run Autodesk 2005 with the AutoCAD profile, the target line would look like this:

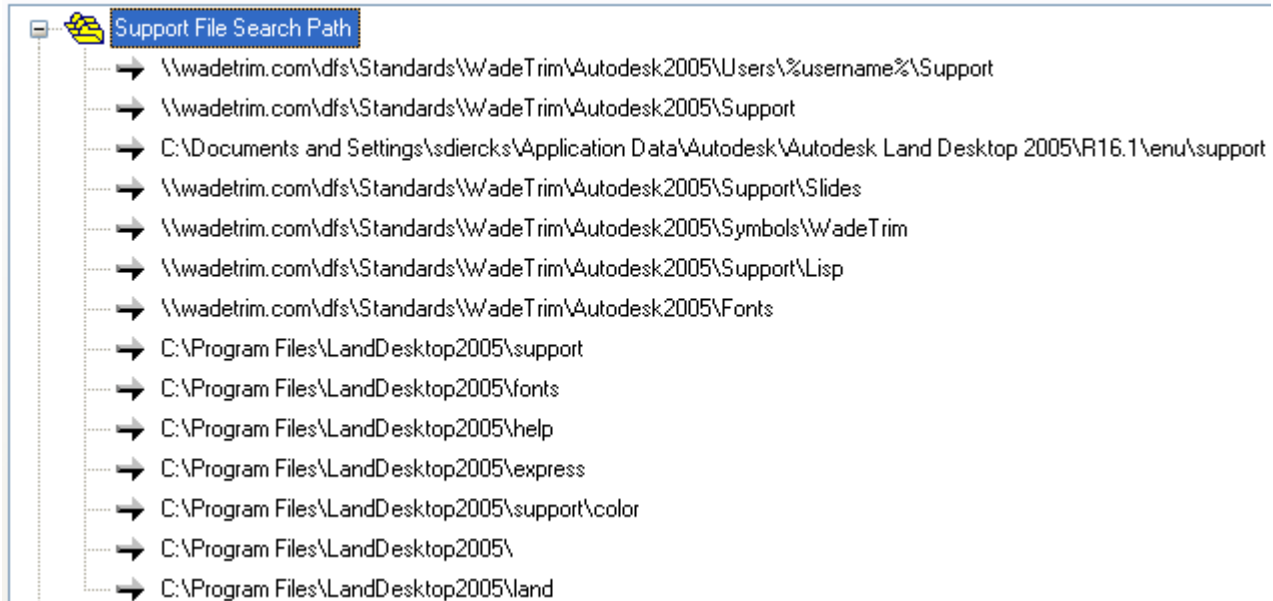
```
"C:\Program Files\LandDesktop2005\acad.exe" /p "%wadetrin.com\dfs\standards\Wadetrin\autodesk2005\autocad.arg"
```

What do the support paths look like?

The support paths are determined by the .arg that was used when launching the Autodesk product. In this case the Support File Search Path would look like this.

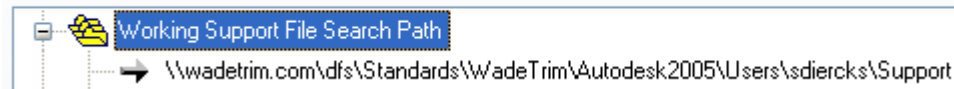
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Search paths, file names, and file locations:



Notice the first path which uses the %username% variable. That path, under the Working Support File Search Path, after it has been resolved will look like this.

Search paths, file names, and file locations:



With the user folder being the first in the search path, the user controls the environment by placing the custom files in their folder. Since AutoCAD stops looking for certain support files once it finds them, such as the .pgp file, it will read the .pgp file in the user folder and ignore any others it finds along the way.

Bring in the WAN

Well then, here we are. We have established that we can put lots of files on the server. We can restrict permissions once those files are on the server. We can also provide easy access to the files we have put out there. That is all great stuff except for the fact that I have offices all over the place and I really don't want to keep multiple servers all up to date because that would be a pain. Right you are. That is where DFS comes in. What is DFS? It is short for Distributed File System. What does it do? When properly setup, it will replicate a set of files from one location to another and keep all the repositories up to date and in sync. Wow, that sounds great, how do you set that up? Heck if I know. I did it by sitting down with my server geek and telling him how I wanted it to work. He pushed the buttons and did all the setup and tweaking until I was happy with the results. Here is what I do know about DFS. It has made my life a whole lot easier. When I make a change to a standard file, all 12 of our office have that change in a matter of minutes and I can't forget to update a server.

Some benefits:

- Centralized Standards Management
- Files updated quickly everywhere.
- User customization travels with the user
- More Stability and Flexibility
- Less aspirin required.

Some Pitfalls

- Need a backup plan if the DFS fails

- Program speed could decrease

I hope that some of this information will make your life easier as a Cad Manager. Thank you for coming and listening