HOW-TO

ACF (Advanced Custom Furnis)

About this How-to and some Words

For people that haven't create a furni yet, I suggest that take a look in the tutorial section of Ragezone Forums. Here they find a lot of [TUT] to start the creation of simple furnis (no interaction, just turn left-right function). That's a good start with director and retro customs.

What we talk in this How-to? Particularly two things: first 360º rotation furnis (very easy), and second to give interaction to a custom furni; using the built-in functions of the DCR´s. About 360º there's nothing to say, you will see that's very easy and the only thing you need its the front side bitmap and the back side bitmap. With the interaction it's another world; there's a lot of different "Class" (functions) we can use, and depends on us to determinate witch one fits our needs to create the furni.

What we don't talk here? Creation/modification of catalogue pages or buy_furni files. Also I don't talk nothing on how-to host own DCR´s and nothing about pixel-creation. I' m not a pixel artist…so if someone has no idea or need information about that things; please search in the [TUT] section of RageZone Forums. There's a lot of how-to created by some wonderful people that may help you with that.

I have seen on RageZone Forum some furnis with animation, that doesn't use this technology. For example the furni called "Super Machine". If you have seen it, it's a funny furni, but it has a "big" problem: it's size in KB. That furni is created using the cast members as frames, so the furni creator has to copy the bitmap in every cast member and make the modifications on each frame. As a result we get a 256 KB cct file, witch is too great in comparison with a 20 KB standard cct. In theory there's no problem if a furni file size is to great, except by the amount of bandwidth and memory usage from the client browser; that maybe will cause a browser crash and the sadness of the retro-client-user. But if you use the built-in functions of the DCR´s to create your furni, the cct file will only contain the necessary things to work: bitmaps, names of the cast members, and the name of the class where the furni belongs to. The code that makes the furni interactive, is built-in inside the DCR´s, so you don't need to put in your cct. As a result we get a truly 100% interactive/animated furni with a very small file size.

I believe in a community of developers that join its knowledge, source and effort to create something far away from the original. That's why I create this how-to: share my own knowledge with everyone and let other people to keep his mind open and to keep working to get something special.

I hope that you would appreciate this how-to and when you arrive to the final page, you could create Advanced Custom Furnis.

@Salamander@

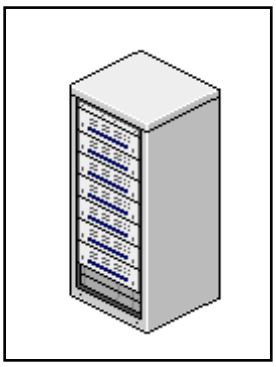
Note: I don't want to criticize the creator of the "Super Machine" furni. It's a very impressive furni and it has a lot of work on it. Thanks to release for everyone.

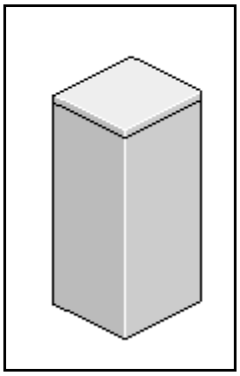
Chapter One

Custom Solid with 360º Rotation

So let's start! First its to check that already we have all requisites needed to complete this chapter:

- **Recover-cct**. Search Google if you don't have it. This software can unprotect cct files and convert to cst format so we can edit with Director.
- **Macromedia Director MX 2004**. You can download from Adobe web. That's the main program that lets us edit/create furnis, and save as cct files.
- **Front & Back Side and Small Bitmap** of the furni we would create:


example1_front_side.gif


example1_back_side.gif

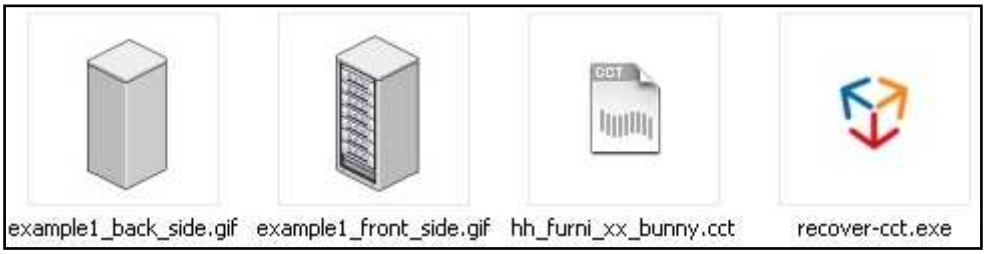

example1_small_size.gif

Thanks and credits to Tsuka for create this alts.

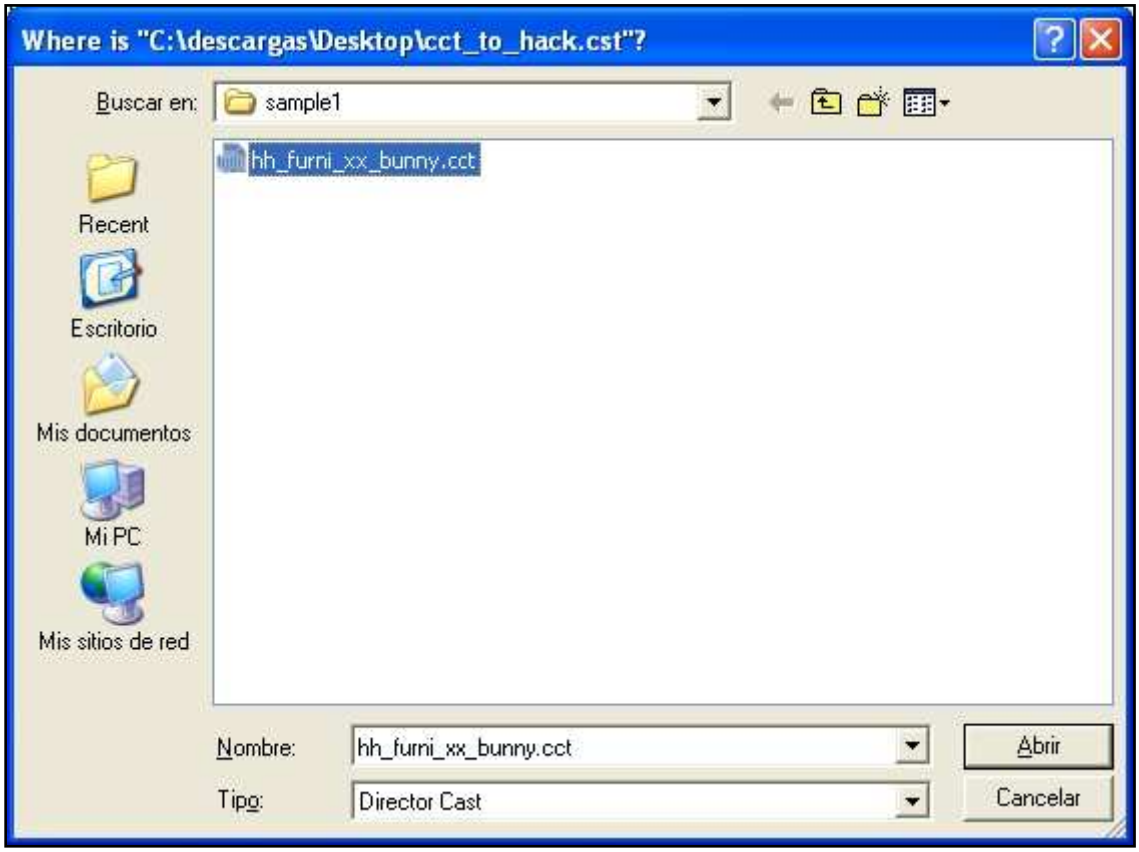
- **CCT File "hh_furni_xx_bunny.cct"**. This is the original cct file of that furni called "bunny". For this moment we would use this, because we don't need interaction, just 360º rotation.

And that's all we need for the moment. So let's begin with the work.

1. Copy the executable "recover-cct" to the same folder that contains the file "hh_furni_xx_bunny.cct".



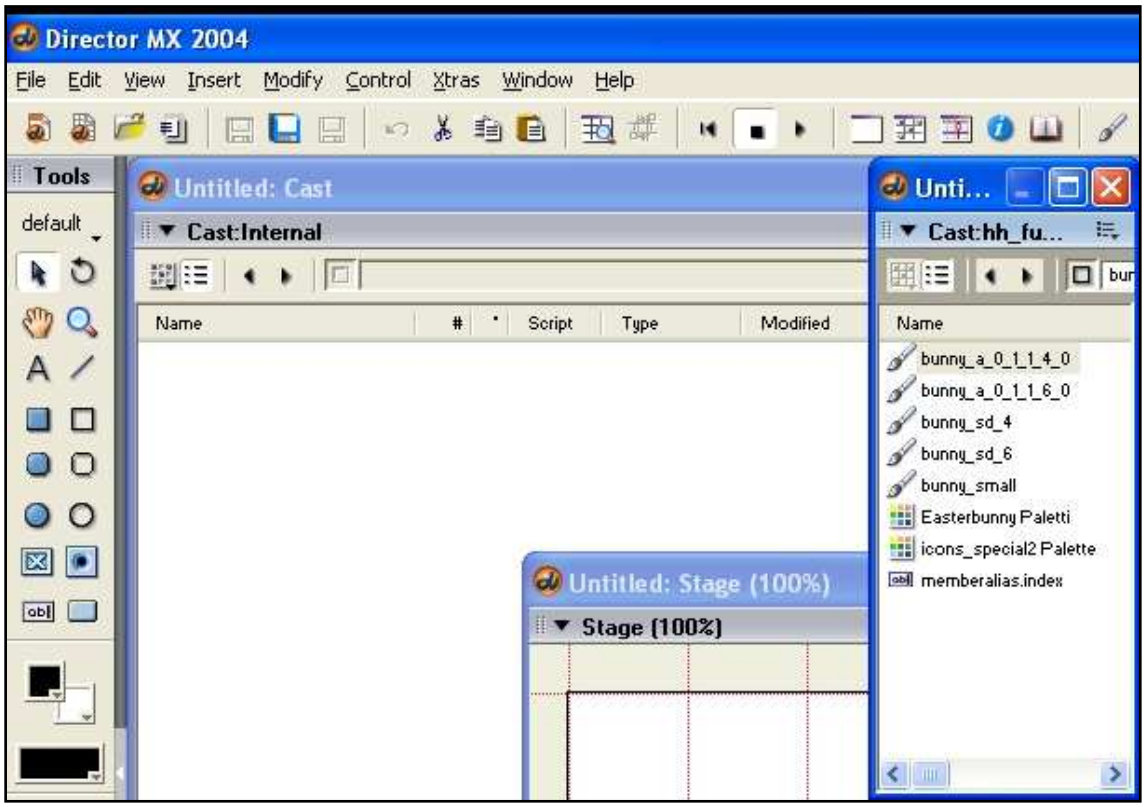
2. Start “recover-cct.exe” and double click twice the file “hh_furni_xx_bunny.cct”.



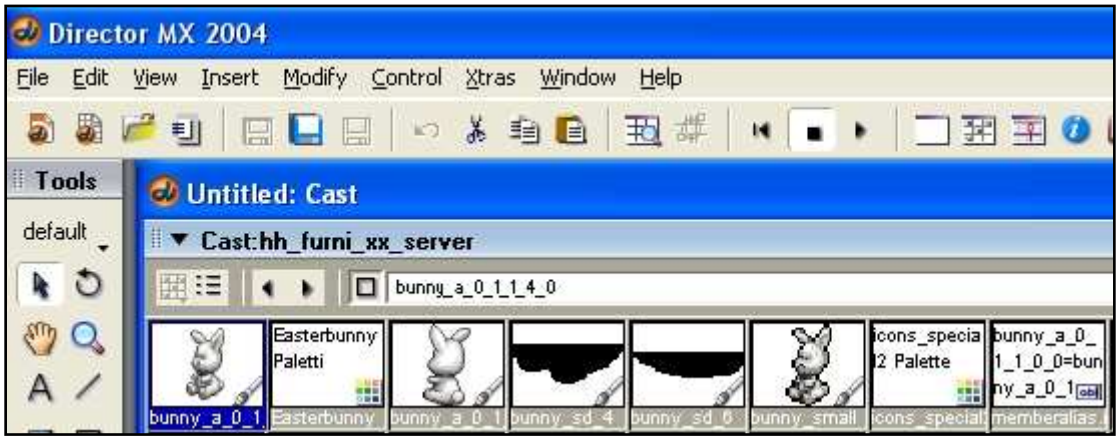
3. Click to close the “recover-cct” window and see that there’s a new file in your folder called “unprotected_hh_furni_xx_bunny.cst”.

4. Rename the new created file to “hh_furni_xx_server.cst”. *If you are planning to change your furni name, keep in mind that the file name and cast members names are the KEY for a working 360º rotation. So take care about that.*

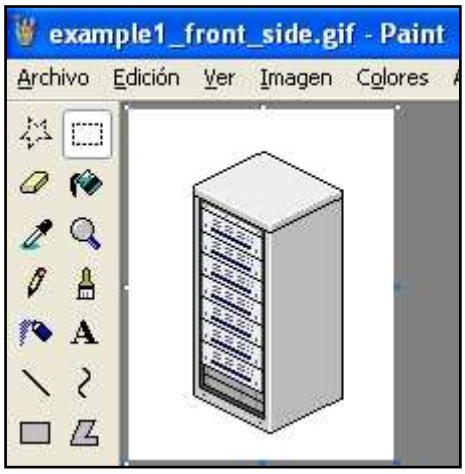
5. Double click the new file “hh_furni_xx_server.cct” to start edit with Macromedia Director.



6. Expand the Cast Window and click on Menu “View->Cast->Thumbnail”. *The cast window it’s the one that has de list of cast members of that furni: bunny*, Easterbunny Paletti, icons_special2 Palette and memberalias.index.*

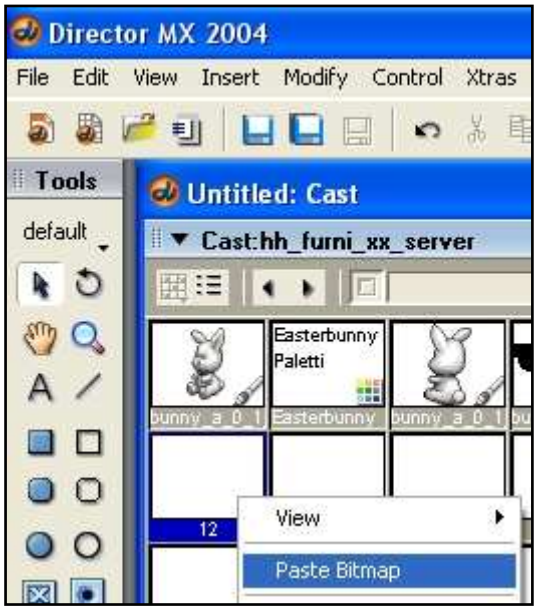


7. Go back to your current working folder and double click the file "example1_front_side.gif" to star edit it with your favourite pixel editor. *In this how-to we use the standard application "Paint" included with Microsoft Windows*.

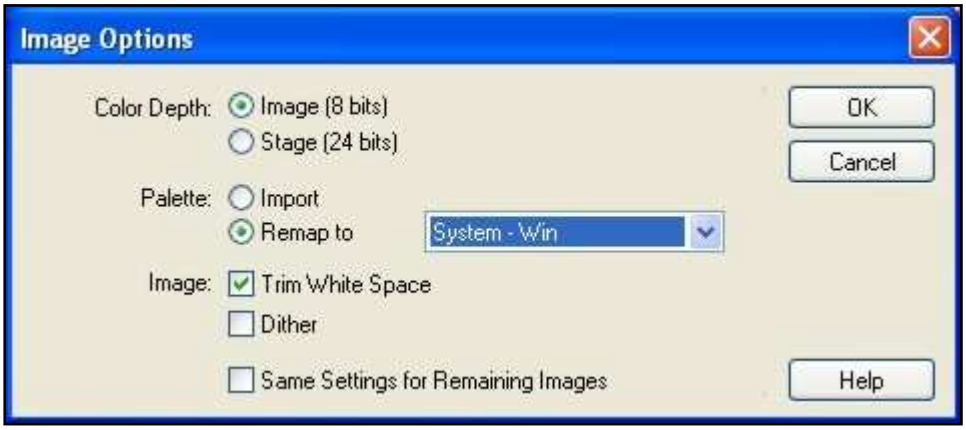


8. Click to use the "Selection tool" and click and drag to select all bitmap server. Then click Menu "Edit -> Copy".

9. Go back to the Main Director Window and select one empty cast member. Right click inside and select "Paste Bitmap". *I suggest that you use the cast member 12; it's no important but keeps some kind of order while we are working.*



10. Director ask us to select the colour depth and a default Palette. *All Habbo furnis are in a standard 8 bits Palette, I'm not pretty sure if it's the "System – Mac" or "System – Win". I suggest that you use the one that fits better with your current bitmap, so you don't have colour changing*. In this case, we use this configuration:

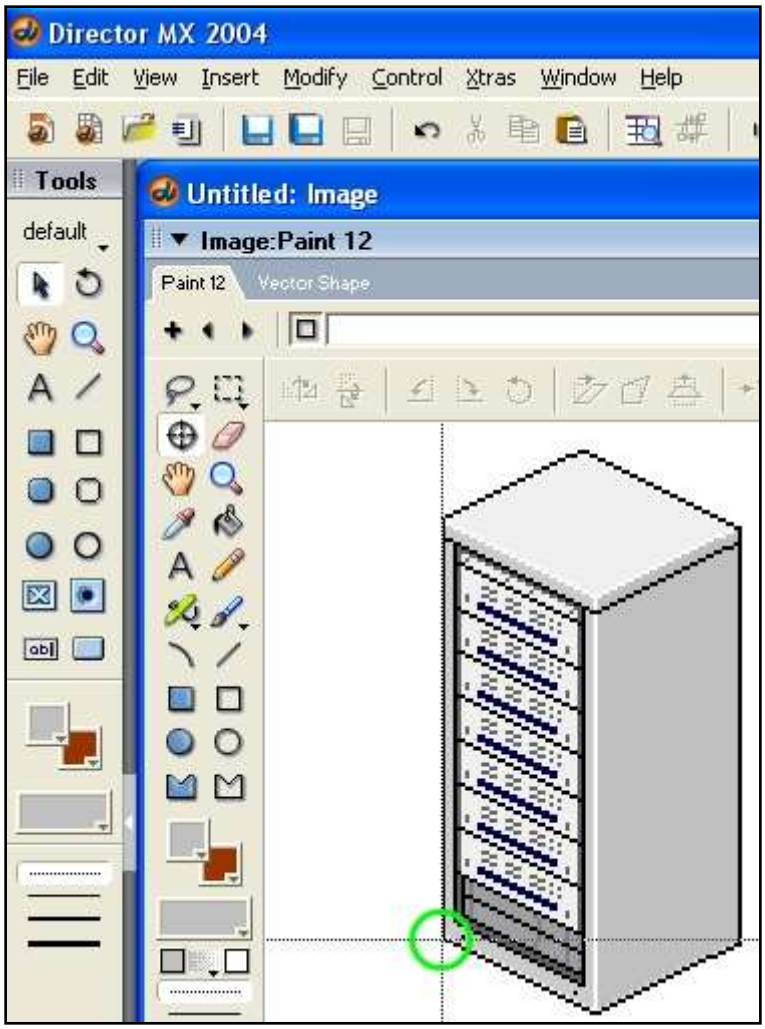


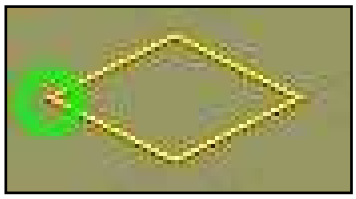
Click the "OK" button to complete the process.

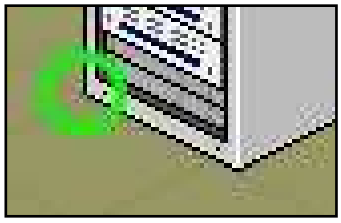
11. So now, we have a new cast member just under the "front_side_bunny".

12. Double click the new cast member to start edit it. Click on the "Registration Point Tool".

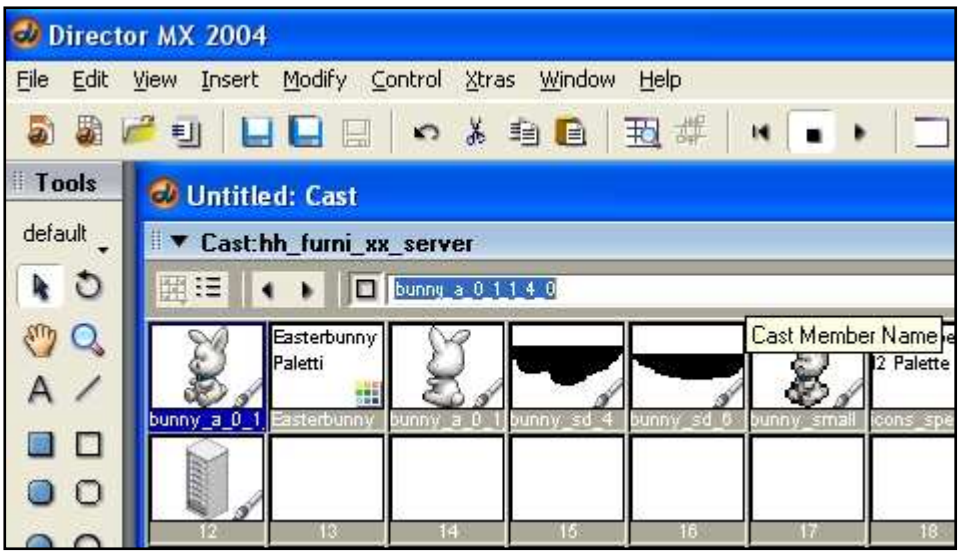
13. Move your cursor over the bitmap, and place the Registration Point in the down-left corner of the furni. *The Registration Point it's very important for a good working furni. We have to put in that position, because the dcr's use the left corner of a floor tile as the relative position of the furni with the floor. So take care about that, or later you will have a furni with a lots of position problems.*



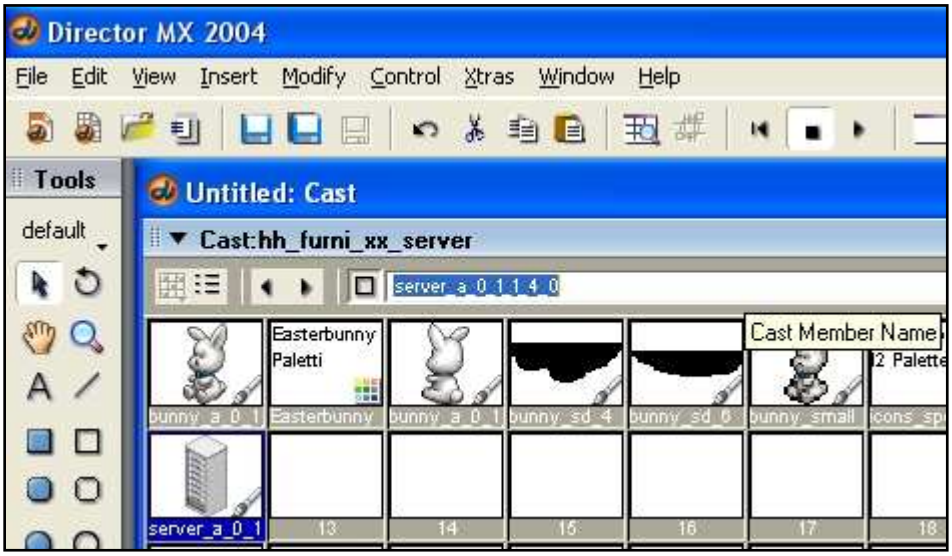




14. Close the "Edit cast member" Window and select the first cast member called "bunny_a_0_1_1_4_0". Select and copy all name characters from the "Cast Member Name Field".

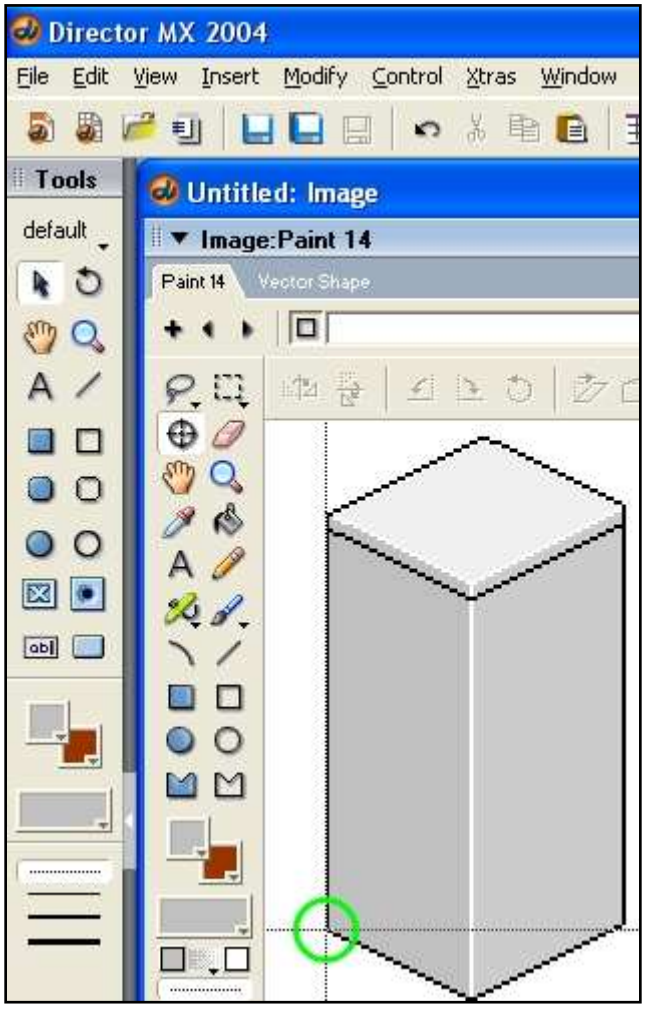


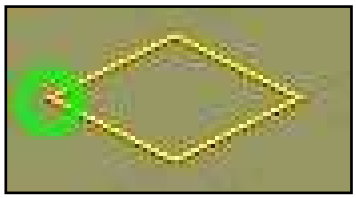
15. Select the cast member “12” and paste the text in the “Cast Member Name Field”. Click to change the name from “bunny_a_0_1_1_4_0” to “server_a_0_1_1_4_0” and hit Intro to save changes. *The name of the cast members are KEY to get a working 360º rotation furni, so if your cct file is named “whatever”, rename cast member as “whatever_a_0_1_1_4_0”.*

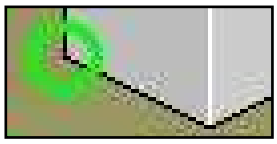


16. Select and delete the cast member “bunny_a_0_1_1_4_0” so we don’t need anymore. Drag and drop the new cast member “server_a_0_1_1_4_0” to the position of the deleted one. Now we are done with the front_side_cast_member.

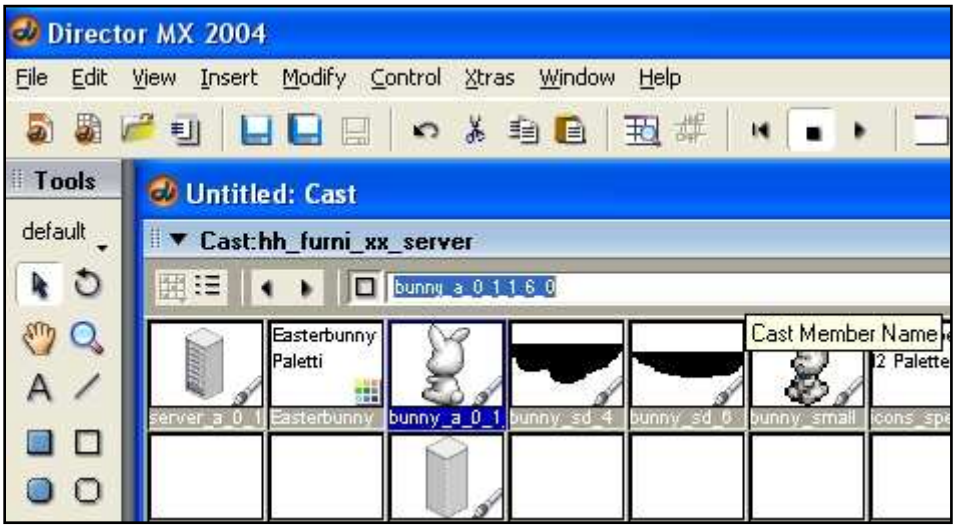
17. Now we are going to repeat steps from 7 to 13, but using the "example1_back_side.gif" bitmap. So open that file with paint, select all bitmap and copy it. Now go back to Director Window and paste to the blank cast member which is just under the "back_side_bunny". Select correct colour depth and Palette. Double click to edit the cast member and set the Registration Point in the down left corner of the bitmap. *Repeat: take care about the position of the Registration Point.*



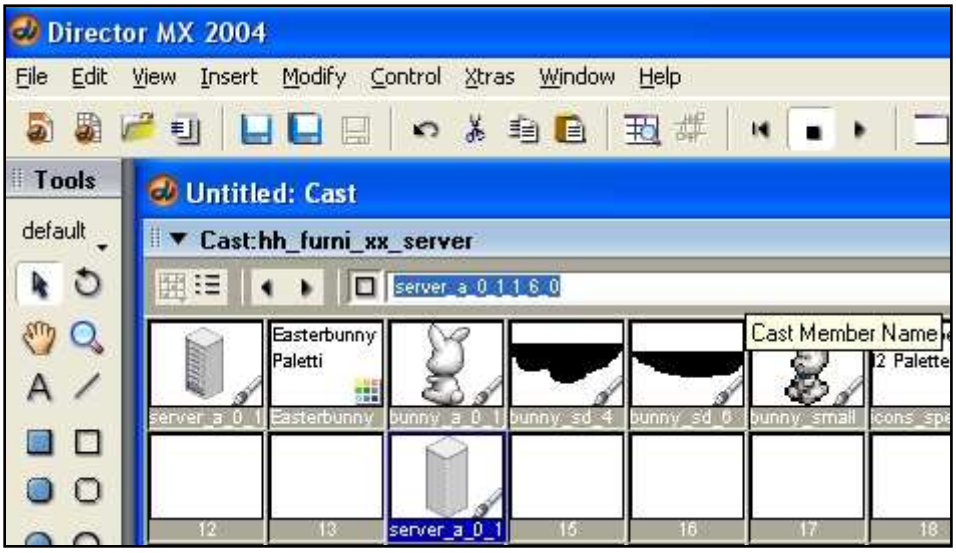




18. Close the "Edit cast member" Window and select the cast member called "bunny_a_0_1_1_6_0". Select and copy all name characters from the "Cast Member Name Field".

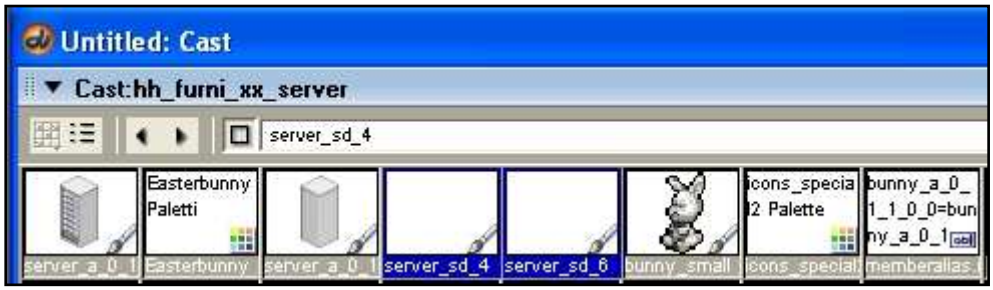


19. Select the cast member “14” and paste the text in the “Cast Member Name Field”. Click to change the name from “bunny_a_0_1_1_6_0” to “server_a_0_1_1_6_0” and hit Intro to save changes. *Repeat: The name of the cast members are KEY to get a working 360º rotation furni, so if your cct file is named “whatever”, rename cast member as “whatever_a_0_1_1_6_0”.*



20. Select and delete the cast member “bunny_a_0_1_1_6_0” so we don’t need anymore. Drag and drop the new cast member “server_a_0_1_1_6_0” to the position of the deleted one. Now we are done with the back_side_cast_member.

21. Now we work with the two cast member furni shapes. Double click to edit the first named “bunny_sd_4”. Select all bitmap with the selection tool and delete it. Close the Edit Window and rename the cast member from “bunny_sd_4” to “server_sd_4”. Repeat the same with the “bunny_sd_6” and rename to “server_sd_6”. The cast window will look as here:

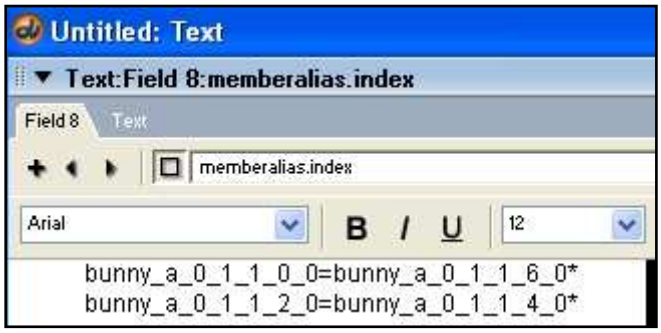


22. Now we are going to repeat steps from 7 to 13, but using the "example1_small_size.gif" bitmap. So open that file with paint, select all bitmap and copy it. Now go back to Director Window and paste to the blank cast member which is just under the "small_size_bunny". Select correct colour depth and Palette. *You don't need to change the Registration Point of this bitmap, because by default, it's in the center of the image, and that's perfect for the small icon of the furni*. Select the cast member called "bunny_small" and copy all name characters from the "Cast Member Name Field".

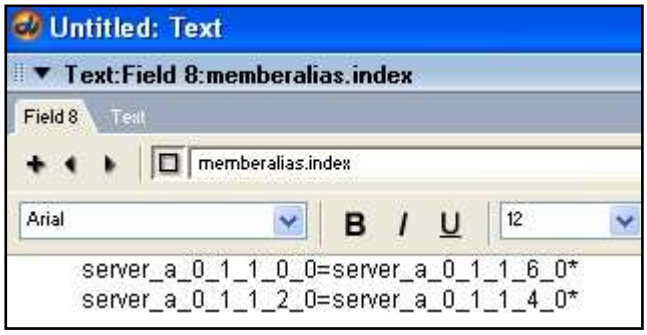
23. Select the cast member "17" and paste the text in the "Cast Member Name Field". Click to change the name from "bunny_small" to "server_small" and hit Intro to save changes. *Repeat: The name of the cast members are KEY to get a working 360º rotation furni, so if your cct file is named "whatever", rename cast member as "whatever_small"*.

24. Select and delete the cast member "bunny_small" because we don't need anymore. Drag and drop the new cast member "server_small" to the position of the deleted one. Now we are done with the All bitmap cast members:

25. Now double click to edit the "memberalias.index" cast member.



26. Let's take a close look at the first line of that "strange code". As you can see, it's formed by the cast member names. But, where is that "bunny_a_0_1_1_0_0" cast member? It doesn't exists in the main Cast Window; because it's a "virtual cast member". Basically it's a code to tell the DCR´s to create "the virtual cast member" using a mirrored cast member "bunny_a_0_1_1_6_0": that's the function of "*" at the end of the line. So if we understand this, and we have noticed that this code is based on the names of the cast members, then we have to replace all words "bunny" with "server", so it looks like:

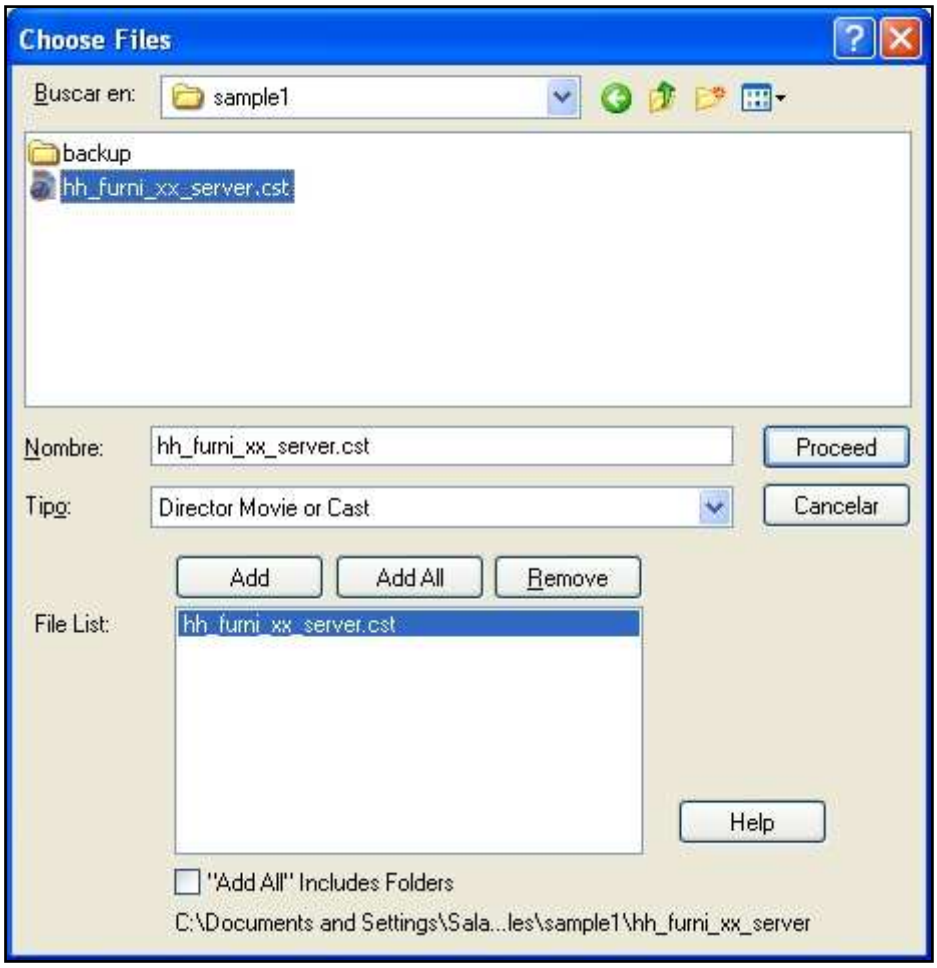


And now the new code tells DCR's to use the existing "server" cast members to create a new virtual-mirrored cast members. So that's all we need for 360º furni rotation.

27. Close the edit window to save changes to the current "memberalias.index". Click Director's "Save Button" . Now we are going to protect the movie and create a backup file of our work. So click in the Menu "Extras -> Update Movies" and change the options like this:

Click on "Browse" Button and select one folder for a destination backup.

28. Then click “OK” and double click the file “hh_furni_xx_server.cst”:



Click “Continue” to start the conversion of the file from “CST” to “CCT”.

29. And that’s all. Now we get a new file called “hh_furni_xx_server.cct” and we have to move it to our “/dcr/furni” folder. Create the necessary files and move it to the “/database/buy_furni/server/” folder. And add new line in the Catalogue so we can buy the new furni.

End of Chapter One

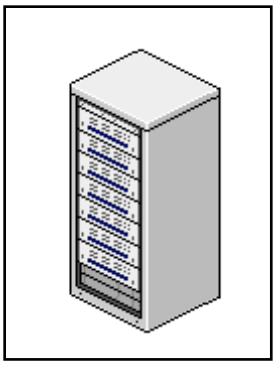
Chapter Two

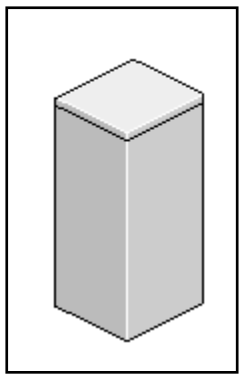
Custom Solid with 360º Rotation + Interactive

In this chapter I'll assume that you have read, understand an Test all Chapter One. So I'll skip all screens relative to: unprotect cct file, paste and rename new bitmaps, edit of "memberalias.index" and export to cct. If you have any doubt about this things, please, refer to Chapter One.

Requisites needed to complete this chapter:

- **Recover-cct**. Search Google if you don't have it. This software can unprotect cct files and convert to cst format so we can edit with Director.
- **Macromedia Director MX 2004**. You can download from Adobe web. That's the main program that lets us edit/create furnis, and save as cct files.
- **Front & Back Side, Monitor/Keyboard Bitmap, and Small Bitmap** of the furni we would create:


example1_front_side.gif


example1_back_side.gif


example2_monitor.gif


example1_small_size.gif

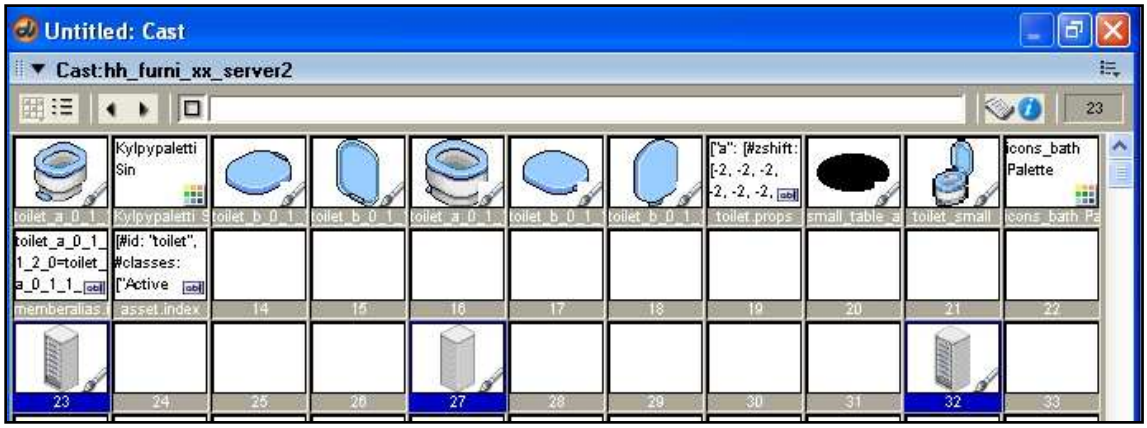
Thanks and credits to Tsuka for create this alts.

- **CCT File "hh_furni_xx_toilet.cct"**. This is the original cct file of that furni "toilet". We would use this, because he has built-in 360º + Interaction Class.

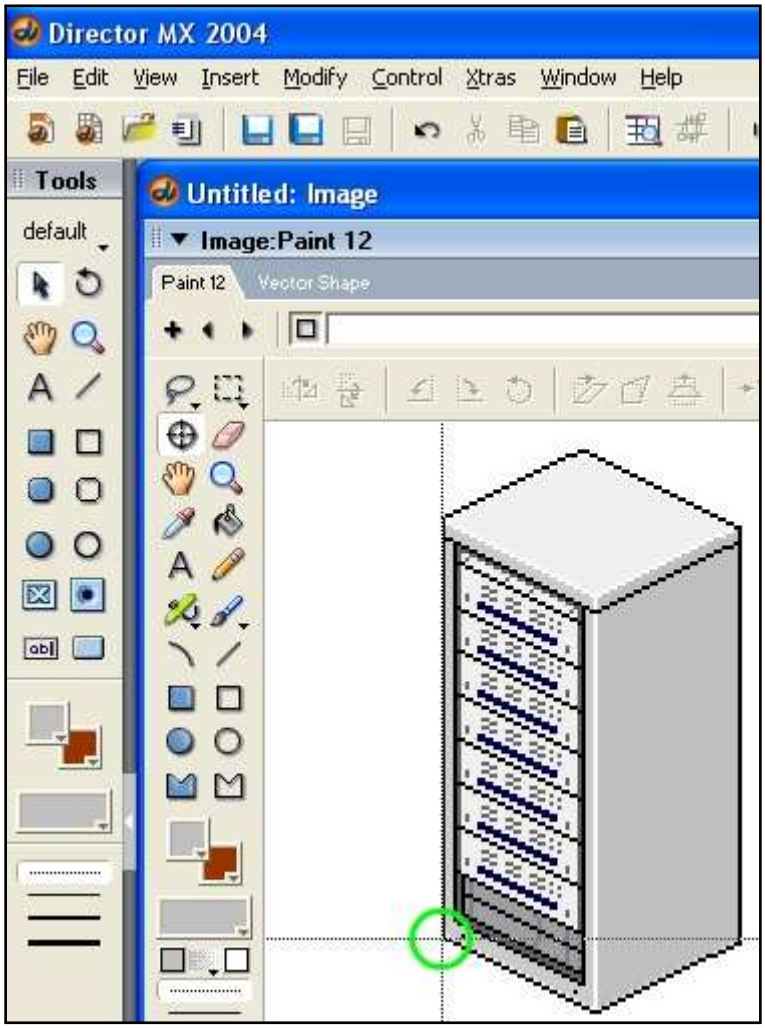
And that's all we need for the moment. So let's begin with the work.

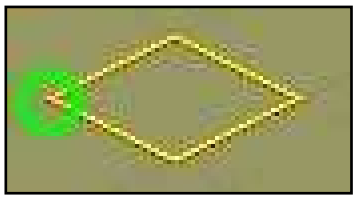
1. Copy the executable "recover-cct" to the same folder that contains the file "hh_furni_xx_toilet.cct" and unprotect that file. Rename the new created file to "hh_furni_xx_server2.cst". *If you are planning to change your furni name, keep in mind that the file name and cast members names are the KEY for a working 360º rotation + Interaction. So take care about that.*

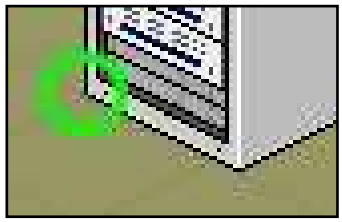
2. Open the new file “hh_furni_xx_server2.cst” with Director and start to copy/paste the example bitmaps under the original ones as follows:



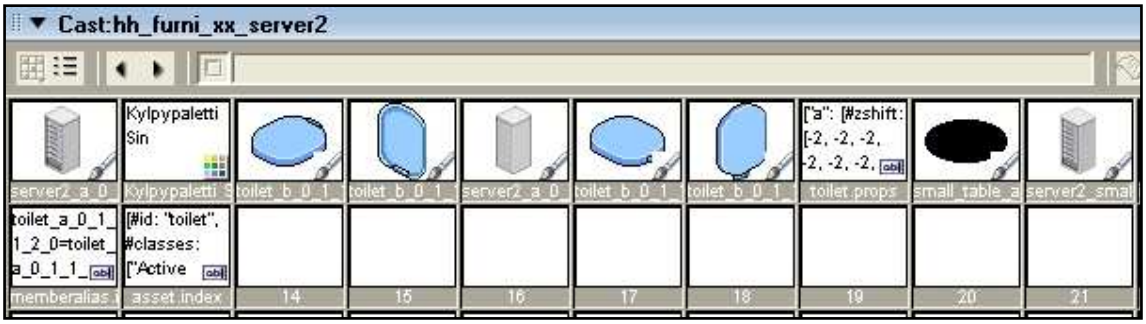
3. Now edit each new cast members to set the Registration Point in the correct position. *The Registration Point it’s very important for a good working furni. We have to put in the bottom left corner position of the bitmap, because the dcr’s use the left corner of a floor tile as the relative position of the furni with the floor. So take care about that, or later you will have a furni with a lots of position problems*.



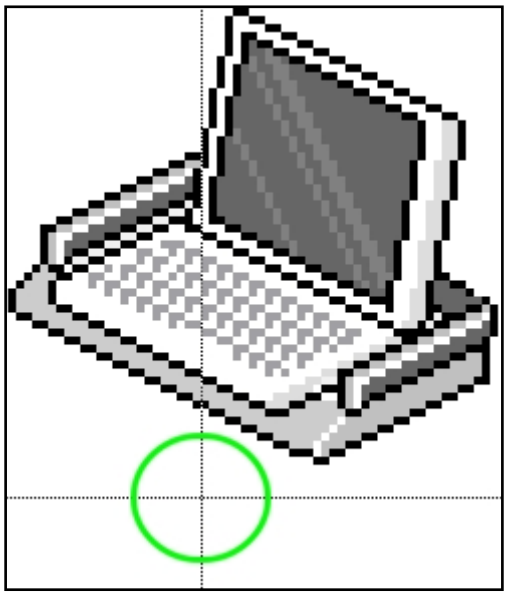




4. Now it's time to rename this new cast members using the old ones as a templates: "23" to "server2_a_0_1_1_4_0", "27" to "server2_a_0_1_1_6_0" and "32" to "server2_small". *The name of the cast members are KEY to get a working 360º rotation + Interaction, so if your cct file is named "whatever", rename cast member as "whatever_a_0_1_1_4_0"*. When finished, delete the old cast members "toilet_a_0_1_1_4_0", "toilet_a_0_1_1_6_0" and "toilet_small". Then move the "server2*" cast members to its correct position as show:



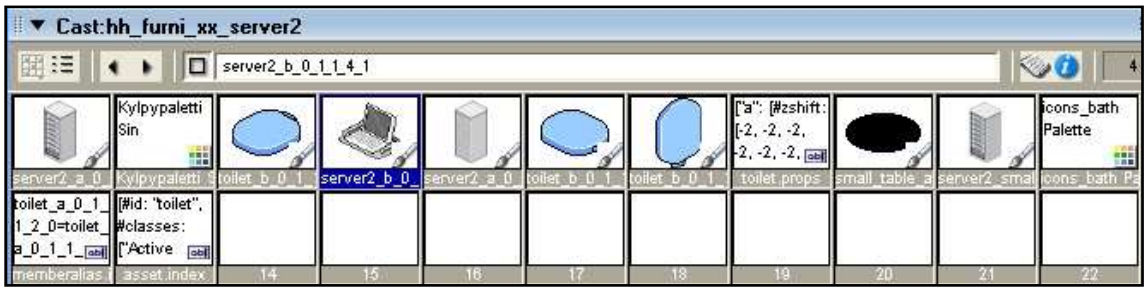
5. Now copy the bitmap file "example2_monitor.gif" into a new cast member, just under "toilet_b_0_1_1_4_1", and set the Registration Point as show:



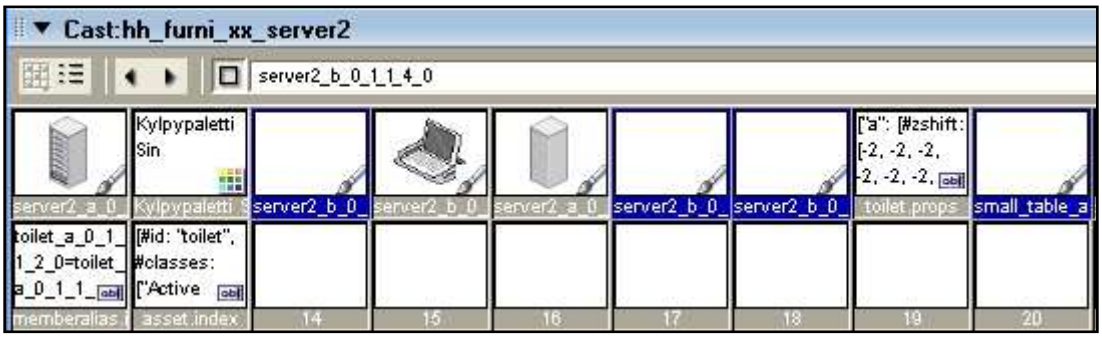
We have to put it in that "strange" position, because this point correspond with the registration point of "server2_a_0_1_1_4_0". If you set the registration point little down, then the monitor height will be greater, and if you set the registration point little to the left, then the monitor it's more on the right of the server. You can do a lot of tests with this registration point later, but for now set as show in the picture.

6. Close the “Edit Window”. Time to copy the name of the cast member “toilet_b_0_1_1_4_1” and to paste in the new cast member “15”. Then edit name to “server2_ b_0_1_1_4_1” as show:

7. Delete the old cast member “toilet_b_0_1_1_4_1” and move the new one to its position:

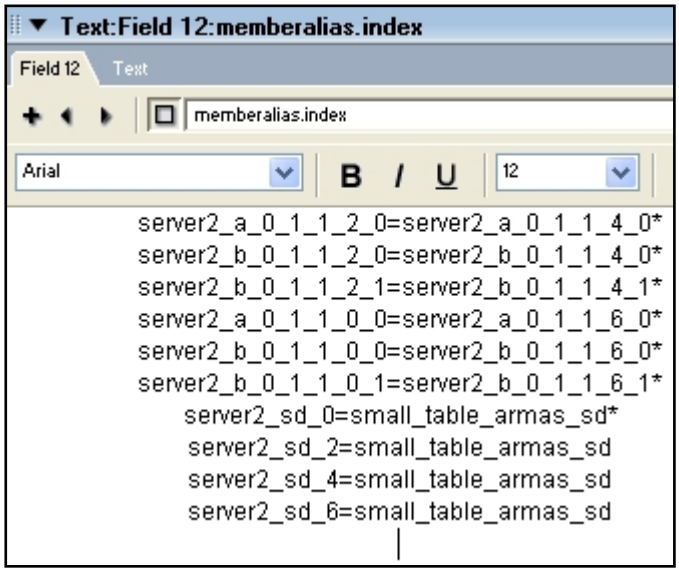


8. Edit and delete the bitmaps of this cast members: “toilet_b_0_1_1_4_0”, “toilet_b_0_1_1_6_0”, “toilet_b_0_1_1_6_1” and “small_table_armas_sd”. Only delete the bitmaps, not the cast members, because we change it’s names from “toilet*” to “server2*”:

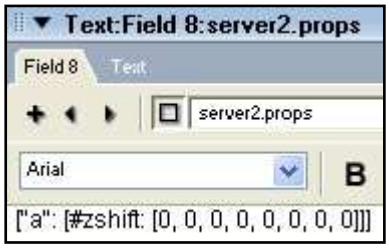


In this example we don’t need to use that cast members, but if you are planning to create a more complex furni, I tell you that you can use it. For example, in cast member “server2_b_0_1_1_4_0” we can paste a bitmap that represents a drawer where the monitor and keyboard are stored in the “closed” position. The cast member “server2_b_0_1_1_6_0” will be the back side of the drawer (invisible in this case); and the cast member “server2_b_0_1_1_6_1” will be the back side of the Monitor/Keyboard. Use your imagination and sense and feel free to use it for your needs. The cast member “small_table_armas_sd” is the furni shape.

9. Edit “memberalias.index” to active 360º rotation. Replace all “toilet” words with “server2” and close the edit window:



10. Change name of cast member “toilet.props” to “server2.props”. *I’m not pretty sure what does this code, but I think that it’s related with the rotation. Something like “when rotate furni, move the Registration Point 2 pixels up and 2 pixels left”. It’s about to try and test.* Edit “server2.props” and change “-2” to “0” and close the edit window.



11. Double click to edit the cast member “asset.index”. Let’s take a close look at this code:

The “id” it’s the name of the furni. The “Active Object Class” tells to DCR’s that this is an interactive furni. The “Furniture Toilet Class” tells to DCR’s that this is a toilet furni, so the DCR’s know that it has X cast members, that it can rotates 360º and when you activate him (double click), which cast members are show or hide. And this is the secret to create Interactive Furnis. There’s a lot “Furniture Class” inside the furnis and depends on us to determinate witch one fits our needs to create the furni.

12. The only thing we need to change here, it's the "id". So replace "toilet" with "server2". And close the edit window.

13. We are done. Click Director's "Save Button" and click in the Menu "Extras -> Update Movies" to convert your actual CST file to a CCT. I suggest to make a backup of the cst file. Now you have a new file called "hh_furni_xx_server2.cct". Copy to your "/dcr/furni/" folder.

14. About the buy_furni, you can copy the toilet folder and rename it to "server2". Edit file name.txt and change it to "server2". Then edit file type.txt and change from "sit" to "solid" (*or you want to sit in you new server?? hehe*). The last thing is to create the necessary files in the catalogue to buy that furni. And enjoy it.

End of Chapter Two

Final Notes

About the Automatic Mirroring of cast members, you can use it in every type of custom furni: posters, rugs, or whatever. The only thing important it's to take care with the names of the cast members, and later modify "memberalias.index" to fit the new names.

Always do a backup of the files .cst and .cct. It's easy to make a mistake in the process, so save the file and if you are in a trouble, go back to the original one.

In this How-to we use the application "Paint" to copy the bitmaps into Director. Feel free to use your standard pixel editor (like Photoshop). Also you can configure Director to use a external editor instead of the built-in. That's your choice, but remember that to put the registration point, you need Director's editor.

In this How-to we created two furnis, but they are just one floor tile size. If you create a furni using large bitmaps, keep in mind that only one unit will be solid (unit=floor tile). It's possible to create custom solid furnis greater than one unit, but you have to use another cct file as a guide (for example a table, which is 2 x 2 units).

Each type of interactive/animated furni created by Sulake has it's own Class. So if you want to create a poster furni with animation, look for a Sulake's one that do it, and then use it as main base to create your's. And that's the same for all kind of furnis: rugs, solid, sit, doors, etc…Every version of DCR's has it's own built-in Classes. So don't create a custom furni with v15 and later use it on a v13 DCR; it won't work (PH BOX). But if you create a furni using v13 Class, it will work without problems even on a v16 DCR.

Hope you will find this How-to useful, and I has opened your mind to the new world of ACF (Advanced Custom Furnis)

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