Star Wars Dejarik Holochess Blender 3D Model With Cycles Renderer Materials

Version 1.0 - Holographic "chess" table that appears inside the Millennium Falcon in Episode IV and in others. Does not include any monsters/creatures.

For use with the free open source 3D program Blender.

You can get Blender in here: http://www.blender.org/

About This Model and How To Use It

As many other Star Wars fans I always liked very much the 3D holographic chess like table in the Millennium Falcon that appeared on Episode IV - A New Hope. This is one of those details of the movie that a lot of people have enjoyed a lot and I wanted to get a good quality 3D model of it but I could not find one on the web that I was happy with so I decided to create one in Blender to my liking cause again it makes this model accessible to anyone because Blender is a free open source program.

As I have mentioned before, finding good quality reference material and good info on original props is always one of the hardest parts of doing a 3D model like this. This time of course it was no different but I managed to find some good quality photographs of the original table and of a good quality prop replica of it that was made by the people of the RPF forum (Replica Prop Forum). In there there was also a somewhat low res 3D model of the prop replica (but still with many good proportions for many parts) embedded on a PDF file which helped a lot in finding the right proportions of the model. Also a drawing from the Yahoo Dejarik Builders Club page helped with this. Between all this material and a lot of hard work one tries very hard to make a model of this wonderful movie artwork piece. There are some moments when you have to make an educated guess for a few details but overall I think that it came out pretty well and that it resembles the original quite a bit.

There is a wee bit of a debate as to whether the model that was displayed at Disney was the real original table shown in Episode IV or not and I believe very strongly that that model indeed is the original one. Many people have of course noted the differences of that one but I think that that is because that same table was modified for Episode V with some different greebles (ornaments) and a new set of lamps that are different from the original ones that were flatter. If you look closely at that table at Disney (or at photos of it) you will notice clearly the marks that were left by the original aluminum knobs (5 of them) and you can also see clearly the marks in the paint of the original black lines with the exact original lines patterns that the Episode IV table had. There are also other marks in that prop that seem to point to some other parts that appeared in Episode IV that are also missing that are not so well known that I tried to replicate as best as I could (an educated guess) due to the fact that there are only very blurry photos of them in the web.

In addition if you compare those photos of the model at Disney with some official photos of the filming in which the real table appears and you do it carefully you can tell that the proportions of



the original object match very well the proportions of the object that was displayed inside a glass box at Disney. If one looks very closely at some replicas of this table and examine them carefully one can tell that the proportions of some parts is not the same as the proportions of those parts in the original that is shown in official photos. Particularly I noticed that the support column has a difference in length (too long) when I did some camera matching even though other parts of those replicas are closer to the real item in proportions. Despite this some of those replicas are pretty good and resemble the original prop a whole lot and that shows the level of skill that some people have that allows them to create these things so well overall.

For those reasons I used those photos of the Disney model and the official ones as the main reference for the construction of this 3D model and this Blender model is the result. The drawings from both the RPF forum and from the Dejarik Builders Club were also very helpful. I will not pretend to say that my model is an exact, exact duplication of the original but I think that it resembles it pretty well, enough to satisfy myself and perhaps many fans or at least I hope so cause I worked very hard at it with the limited material and time that I had.

In a separate layer there is a white part that is like the white greebles that were placed on the table in Episode V but this is an optional item and there is only one placed at a center position in relation to the surface of the table so it is easy to replicate and place at the correct positions of the several ones of those that were given to the table in Episode V. All you have to do is to create copies or instances of it, place the **3D Cursor** at the center position with the **Transform orientation** set at **Global**, constrain the rotation to the **Z** axis and rotate the copies or instances into their right positions/angles. I did not model the lamp housings used in Episode V which are pretty different than those used in Episode IV (their translucent plastic parts are much higher (thicker vertically) and their metallic bases are different & show much more than those in the older lamps). If you want to create an Episode V version that is closer yet you will have to model the new lamp housings and place them in the same positions in which I placed the Episode IV lamp housings. In addition I believe that the black lines patterns were changed for Episode V as well so you will have to create those if you wish to have them. I did not have the time to do more, if I did I would have done all of that too.

I modeled it as an Episode IV version mainly because I believe that that version is the best looking one by far. I think that with the cylindrical metal knobs it looked way nicer and I believe pretty strongly that the use of those tacky looking white greeble parts in Episode V was most likely a big goof by the people that refurbished it for that second movie probably as a result of a last minute rush realization that the original table had lost several of its important parts (probably in transportation and/or storage). Yes, that does happen even with important props like that, because people are human after all.

It has not been textured yet for the same time constrains reasons and because of that it will not have the dirty, used, worn look that it had in the movie. That has to be done by anybody interested in doing so that has the time for it but I least I tried very hard to give it materials that make it look somewhat realistic and I also beveled and/or rounded almost all the edges except those of the



optional white Episode V greeble, one of the edges of the table itself and one edge of the metallic greebles curved parts placed between the cylindrical knobs. Every other edge of all the parts have been either beveled and/or rounded which helps a lot to make the model look more realistic and this alone is a lot of work. Also the model has an overall fairly high polygonal resolution to make it look very smooth. You can see that clearly in the main *Table.000* object when you enter in **Edit Mode**. The model has a total of approximately 3/4 of a million triangles (the result of pretty high polygonal resolution and all the rounding & beveling of the edges combined) which will make the model render very nicely even at close-ups. I used the Cycles renderer and gave the model Cycles materials cause I am learning the new renderer now and as I said when I did the R2-D2 Blender model conversion recently I think that it was time to move forward with the Cycles renderer cause it produces better results and in photorealistic setups it renders way, way faster than the older renderer even when you use only the CPU for it.

Each of the lamp housings have a small sphere inside of them parented to them that has emission materials which produce the light effect that you can see in the lights that are "turned on" which come out through the translucent/transparent materials of the "plastic" parts of the lamp housings. Each one of those spheres has two different materials but only one of them is assigned to the sphere faces at a given moment depending on whether or not you want the lamp to be seen in either the **on** or **off** state. They all have (both red and blue) an emission material and a non-emission material so in order for you to change them from one state to the other all you have to do is to select one of them, enter into **Edit Mode** (all faces have already been left as selected by me) and assign either of the two materials to all their faces. When you assign all the faces of the spheres the **off** material it will look as if the lamps were "turned off" and if you assign all the faces of those spheres the **on** (emission) material the lamps will render as "on" lamps, as simple as that.

All parts have been parented to the main *Table.000* object save the spheres inside the lamp housings that are as I explained before parented to their respective housings. So if you move, scale or rotate the main *Table.000* part everything will move, scale and/or rotate with it.

The only thing that will be missing for you to recreate the rendering as I did it is the environment reflection texture that I gave the model (and that is what I used for illumination – nothing else) cause I did not create those so I cannot distribute them with the table .zip file but they are freely available and you can download those packs with many "studio like" spherical environment textures here:

http://zbyg.deviantart.com/gallery/6278123

Those are pretty good for many renders and were created by 3D modeler **zbyg** and the one you need is the one called: **HDRi Pack 3** and the direct address to that texture pack is this:

http://fav.me/d1v6pv4

And the texture that I used from that pack is the one called: studio029.exr and all you have to do



is to unpack the .zip file to a texture folder of your creation (perhaps a folder named textures right inside the Dejarik Holochess table model folder which is what I did) and then reload the texture from Blender. After you placed the texture in your selected folder go the **Properties** window that appears for default at the right of the program window in Blender when you first install it and in there click on the tab with the bluish world icon and where it says **Color:** click on the **Open** button that is below where it says **Environment Texture** and locate the folder where you placed it and once you see the list of textures in your screen select the **studio029** one and then click on the **Open Image** button at the top right of that window and the environment texture will be set exactly as I did. After that you can just click on the **Render** button in the tab with the camera icon and you will render the image as I did it. There are already two cameras set in the scene (the same ones that I used for the renderings that are already included in the pack). You can of course place a camera as you see fit and render it at any resolution that pleases you. If you try to render the model without giving it an environment texture the scene will look very pinkish cause Blender will default to that color when it cannot find the texture that I gave it.

The paint is a metallic flakes paint material and the size of the flakes can be adjusted by adjusting the Voronoi parameter of the material. The lower the number that you give that parameter the larger the "flakes" will look. The keys (the 29 white and 29 black butons) around the edge of the table have a copy of the same metallic material but with the Voronoi parameter set at a much lower value due to the very small size of them compared to the very large *Table.000* part.

So that is all, again as always I hope that you can find the model useful and that you enjoy it as much as I do.;)

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