



AN8

Interview with Steve

Light setup
tips,
by Jeb

Texturing made simple

Technical jargon made
easy!!! (for n00bs)

LIGHT BULBS

When I first was asked to write this article, the first thing that came to my mind was all the Global Illumination simulations I see the Anim8or community do. GI is an important part of the lighting industry now a days, but it's not the only solution to credible and photo realistic lighting setups. Here are some tips that can help you light your own photorealistic scenes. I use them, and they give me good results (even for animation).

But first, some notes on material considerations. Anim8or has some default material settings that may not be suitable for realistic rendering, so try to make a material that reacts in a neutral way to lighting. By neutral I mean that it has balanced contrast (black shadows and bright highlights).

Specular highlights can be distracting when setting up lights, especially if they are very hard. Since Anim8or can't control which lights produce specular highlights and which don't, you have to be very careful in deciding how you set the specularity, try to light the scene first and then increase and decrease the amount of specularity until it reaches the desired effect.



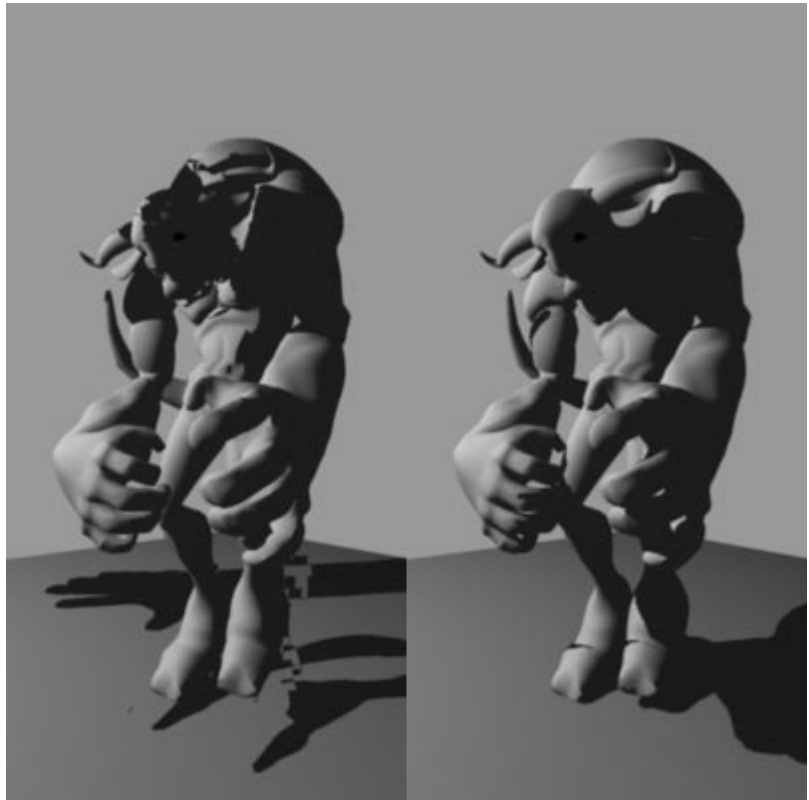
(IMAGE 1) Gray tones help you determine if the light is "burning" the models shaded areas, or if it is not illuminated enough



(IMAGE 2) The light setup in this one is the same as image 1, imagine how out of place it would look in a scene where the other object are not washed out, though it gives a nice snow ambient look and it could totally work in a scene where it is supposed to look so bright.

The Ambient setting in anim8or has a default value of 0.300 and it has its color linked to the Diffuse color value, this defaults could tend to give you a washed out look that sometimes looks unrealistic (unless intended), this happens because the shadow area is affected by this value and color and it doesn't let the light cast contrasted shadows, I am a big fan of dramatic contrast in images, so I find it more interesting than a plain image because with the light and shadow you can tell the audience where to look at. I apply dark colors in the Ambient option and make sure not link it to the diffuse color, since they should be totally different in order to control how the shading behaves. In other words, the ambient light has one color and the object itself has a different one

Ok, now to the fun part, lighting. Anim8or has two types of shadows, Volumetric, and Ray Traced. Volume Lights are at the moment very unstable on anim8or, so we will focus more on the ray traced shadows instead. But Volume lights do give a hard shadow result that is useful in strong daylight conditions, specially around noon time. The advantage of Ray Traced shadows is that can control the softness and simulate different times of day.



(IMAGE 3) volumetric shadows: left, ray traced shadows: right you can easily see where the volumetric shadows go wrong, breaking in places, and being cast where they shouldn't, now look at the ray traced render, perfect shadows that are cast only where they are needed.

Light placement and coloring are probably the most important factors for a good light setup. Placing a lot of lights doesn't mean you will instantly get a realistic scene, it is a meticulous process of placing the lights where they are needed, good photography is writing with light.

Area lights are my favorite kind, if you want to simulate them in anim8or this is a god way of doing it. Place lights in a "matrix style" make them as soft as you want but with not so high intensity values. It will look better than just one soft light since it will cover a wider range of surface, this is the favorite type of light in publicity photography, so its highly recommended to use them for showcasing your objects or making light coming from windows, remember to locate them in a way that they aim at the object, otherwise it will loose the whole effect. Tip, try coloring in a gradient manner(top lights one color and going to the bottom change that color to brighter tone)



(IMAGE 4) Faked Area Light.

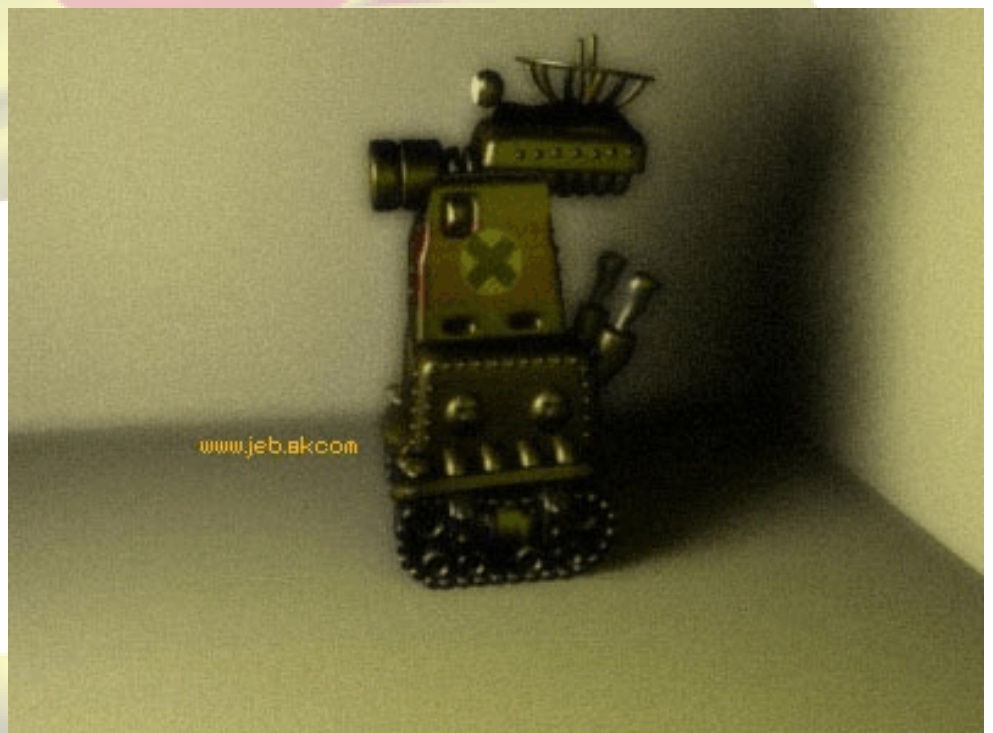


IMAGE 5)

Back light is an aspect that should never be forgotten during image composition. Placing a light with high intensity behind the objects draws an outline commonly used in photography. This leads me to the 3 point light setup, there is the main light (on top left or right), fill light (low intensity, to light the dark parts in the opposite direction of the main light) and the already mentioned back light. This is a commonly used setup if you want to show your models and not use the default light of the program. This way most of the features of the model are shown.

Coloring lights is the other key to success, try to never use a plain white light unless it is really needed for the effect. Even white neon lights give a pale green coloring in the shading of an object. Light colors describe the mood, time of the day, drama of a situation, and depth. Each color has its own psychology. Red describes love, danger and all kind of passionate

feelings. Blue means knowledge, experience, future, technology. Green and bright blue gives us a sense of tranquility depending on the tone. Yellow could mean from sickness to warm sensations. Orange looks sweet as well it could be citric. So colors have tons of significance in the context we place them, try to search about their behavior and you will manage to reproduce the exact mood you aim with them.



(IMAGE 6) Image rendered the first time anim8or got shadows.

Thanks for reading this short article, I hope it gives you a little notion of where to look deeply in the vast world of light and photography. Remember that imitating real life is a hard task, requires practice and is a never ending investigation. With hard work and patience, you can light your scenes like a pro.

Jorge Baldeón (JEB)

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Interview With Steve

We know you've been dying to know a little more about the man that made it all possible, so we decided to ask some questions we think you would like to ask (If you had the chance).

dotAN8: When anim8or reaches the v1 status, do you plan any changes in anim8ors development (or maybe a surprise!!!) ?

Steve: I don't really plan for v1.0 to be a lot different, certainly not the last in a line of improvements. By v1.0 I hope to have a fairly well balanced program with roughly the same level of quality and features throughout. I won't stop working on it at all. The version numbers are just a way to keep track of different releases. You know, so everybody will have to download the upgrade each time a new version comes out or they'll be behind ;-)

dotAN8: What is the most annoying request you are asked?

Steve: The most annoying requests are those that just list everything they've ever seen in any other program. That doesn't help anything. I really do pay attention to what is requested even if I can't get to it right away, or don't think it's the best thing to do. Taken together, new feature request are a good way to gauge what problems people have using Anim8or and where they can use new things. Requests with a good explanation of how they'll help naturally get more attention than those with none.

dotAN8: Any chance you'll ever stop working on anim8or?

Steve: Eventually, unless there's computers in heaven (or wherever people go). But right now I don't have any plans to stop.

dotAN8: Anim8or is a great program, are you planning to make any other applications in the future?

Steve: No, Anim8or pretty much takes all of the spare programming energy that I have.

dotAN8: There have been a lot of requests from users for more features. How do you sort out the ones that will make it to the next versions, from the one's that will have to wait (or never make it)?

Steve: See #2. Also features that work well with or compliment what Anim8or can do are much more likely to be added. They should bring new functionality, add something not easily obtainable with existing tools.

dotAN8: Everyone knows that you don't program anim8or for a living, but when do you program it?

Steve: Weekday evenings and during the days on the weekends. It's my hobby and tends to take all the time I can spare for it.

dotAN8: which do you like more, simply working on anim8or, or the fact that you are helping so many people realize their dreams?

Steve: I love writing code and I love computer graphics. When I realized that Anim8or might be useful to other people, it was really an added bonus. Now with so many users it's hard to tell which is my motivation.

dotAN8: What do you enjoy doing outside of anim8or?

Steve: I enjoy running on the trails in the beautiful California open space parks near my house, spending time with my wife (who's now also a software engineer at Nvidia), good friends and good food, movies, and traveling.

dotAN8: What motivated you to create anim8or?

Steve: I've always been interested in animation and computer graphics. I took a lot of courses in traditional animation at De Anza community college and made some films in the 1980s, but

I'm not an artist. I started attending SIGGRAPH (probably the best computer graphics conference for learning cutting edge technology) in 1984 and was instantly hooked. There I saw demos of all the latest hardware, CG films, and programs like SoftImage and LightWave. I read all I could on computer graphics and started writing programs. Eventually Anim8or appeared and the rest is history.

dotAN8: Did you ever expect the program to become this popular?

Steve: Never in my wildest dreams.

dotAN8: You created anim8or, so you must know your way around it very well, have you made any models worth looking at?

Steve: No, I don't really model much. I can't possibly make things like some of the really great Anim8or users who post things in the forum and whose works are in the gallery. Besides good modeling is hard work! Not fun, like programming.

dotAN8: If anim8or hadn't become this popular, would you have continued updating it as often?

Steve: I'd probably have done different things with Anim8or. Used it to explore some of the latest graphics research trends or such. I wouldn't have done things like adding the Undo command. That was a lot of hard work - not fun at all - but really necessary for a good application.

dotAN8: What is the average monthly download of anim8or today? How about when it first came out?

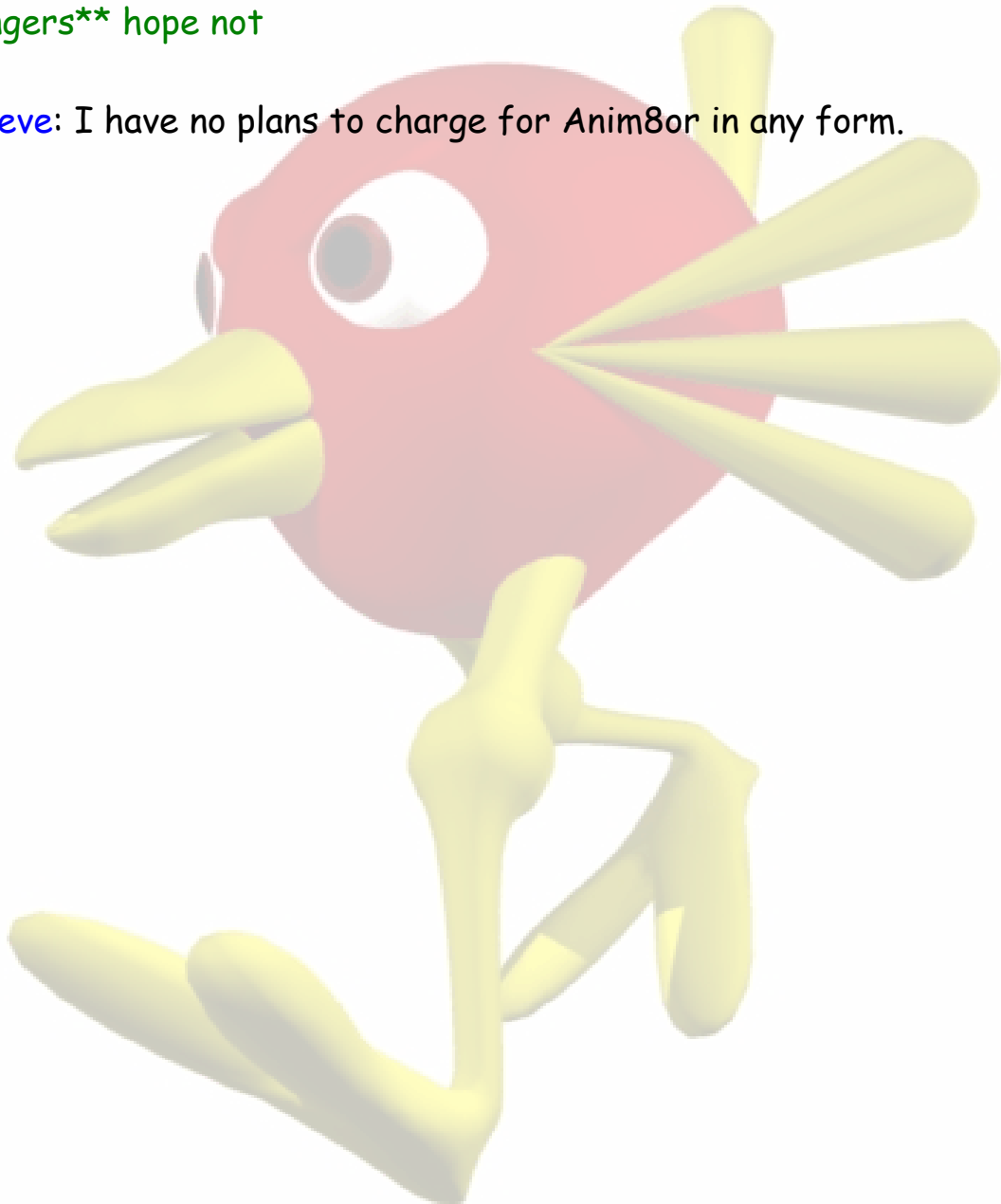
Steve: Anim8or averages between 12,000 and 14,000 downloads a month. It's still growing but not too fast. The first release, v0.1, had a total of 150 downloads over a couple of months. I thought that was doing pretty well.

dotAN8: Have you named the anim8or bird?

Steve: You can't really give animals names. You have to wait for them to tell you what their name is. His name is Robin.

dotAN8: Any chance anim8or will ever go shareware? **crosses fingers** hope not

Steve: I have no plans to charge for Anim8or in any form.



n00bs view: it's not easy being new, you don't know where to find something, what all that jargon is, and just what anim8or is really capable of. This article will clear the last one up for ya'. Written by a more experienced n00b, to help out the newer n00bs.

What Anim8or is (and isn't)

After "How do I do _____?", the most common types of questions asked by newcomers about Anim8or are "Can Anim8or do _____?" followed by some feature available in commercially developed software. The surprising thing about Anim8or is that often the answer is "Yes!" but only with a little more effort on your part. Anim8or, although freeware, is a powerful 3D modeling, animating, and rendering software package. The other thing about Anim8or is that it is still evolving, with new features being added all the time. The Anim8or community is anxiously awaiting the release of v0.9, which promises to add even more features to close more of the gaps between it and commercially developed software. This article is meant to provide an overview of some of what Anim8or can and can't do. It is not an exhaustive exploration of its features or comparison to other packages. And it certainly isn't meant to be a substitute for the manual.

What it isn't

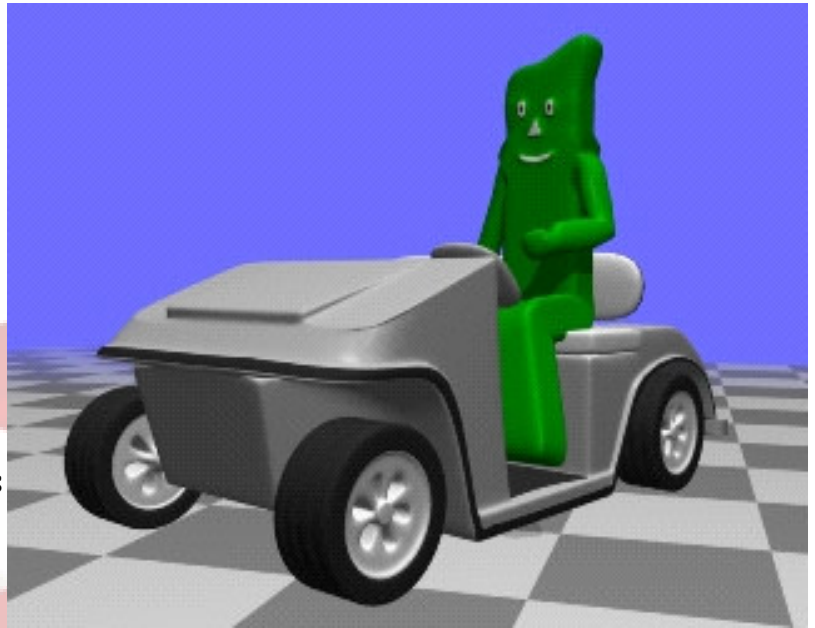
Anim8or is not a professional 3D computer graphics software package like Lightwave, 3D StudioMax, or Maya. It is not an open source project like Blender. It is not a killer rendering software like POV Ray, Yafray or Renderman. It is not a game production platform, an audio/video editor, an image or video compositor or even a paint program. Anim8or is not plug-in compatible. However, its data files are text based and many people have written applications to manipulate and enhance its features, as well as add new possibilities all together.

What it is!

Anim8or is an easy to use, yet powerful 3D modeling/animation package. Its modeling tools are probably its most powerful features, its animation and rendering tools its weakest. Still, it is a capable 3D animation package. It can support key framed animations and can create almost fully articulated characters. And it can render 3D scenes of excellent quality. Like the tools of the early American furniture makers, Anim8or, in the right hands, can create stunning images and animations.

Modeling good behavior

Anim8or's modeling tools can create excellent meshes. Anim8or is capable of manipulating meshes on a point, edge or face basis. It can be used with any of a variety of modeling techniques such as box modeling, spline modeling, open face modelling, and point edit modelling. It has the capability of rotating objects to make modeling easier. Its viewport is customizable to show multiple views at once and you can zoom in on a particular part of a mesh to add or edit detail.



Anim8or has a broad range of primitives available as starting points for modeling. These include spheres, cubes, cylinders, pyramids and numerous multifaceted regular solids. These primitives have editable parameters that enable them to be customized, such as modifying cylinders to create cones. One key primitive that Anim8or does not provide are toruses (donuts). Other premade objects and higher end modeling tools that are not currently available in Anim8or are metaballs, blobby surfaces, NURBS and booleans. If you find yourself asking what these are, then you probably are not at the level to miss them.

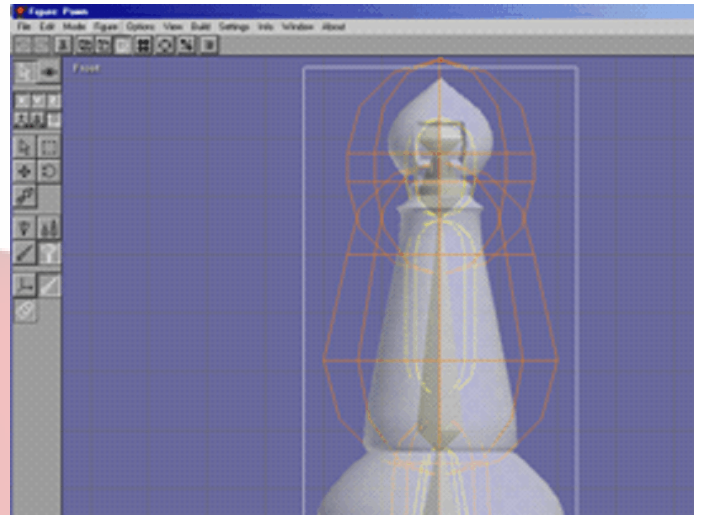
In addition to its primitives, it is possible to construct meshes by using splines and tools such as extrusions along a path and lathing around an axis. In other packages this is sometimes known as sweeping and lofting. Anim8or can also mirror a mesh, join various solids and subdivide a mesh to smooth it.

Anim8or has a powerful 14 parameter material editor that can shade and texture these meshes to create quite impressive models. One can control the color, transparency, roughness, and highlights of surfaces as well as add textures, bump maps, and even environment maps to simulate reflections and add shininess to a model. It fully supports UV mapping of textures and has a handy tool for manipulating textures to place them properly on models.

Although its data files are not compatible with other packages, it can export its models to other formats such as 3D StudioMax (.3ds) and Lightwave (.obj) and import models from these formats as well.

Just Skin and Bones

Animation of objects and characters starts with constructing a skeleton of bones to enable the object to bend and move. Anim8or constructs its skeleton by adding bones to a root bone and then adding objects to this skeleton. The bones range of influence is then set to enable it to move various parts of the object. Unfortunately at this time Anim8or cannot map specific vertices to specific bones to enable fine control of the influence of bones to the skin, but exciting rumors hint that this may be one of the enhancements of v0.9!



Get a move on it!

Admittedly, Anim8or's animation tools are not its strong suit, but that doesn't mean that it isn't capable of producing great animations and still scene renders. Many of the improvements in v0.9 are expected to be in the animation area, meaning that this discussion could quickly become outdated.



Anim8or uses the key frame animation technique where one poses or places objects in a scene at several key points in time and then the computer calculates the position of the object at intermediate frames. Whole objects can be moved or individual bones of figures can be moved. Figure movement uses forward kinetics, which is a fancy way of saying that you bend and shape your figure and then place it in the proper position. This is very similar to the way stop motion animation is done, only you don't have to do it frame by frame.

Animation tools in Anim8or include a single camera and three different types of lights. Preconfigured sequences such as walk cycles can be applied to figures. Invisible targets are available to help control positions of lights, the camera and even other figures.

The camera is fully animatable, being able to change FOV, position, and angle of rotation in all three axes. This makes the camera capable of zoom in and out, panning, tilting and rolling, all common camera techniques in film making.

The three types of lights are infinite (like the sun), local (like a

lamp) and spot (you can guess this one). These lights are also fully animatable, allowing variation in things like color, intensity, angle of dispersion, radius of influence as well as position and angle. These lights can also be set to cast shadows including simple volume shadows and complex ray traced and soft shadows. The Anim8or render engine is quite capable, but it cannot do some of the things found in higher end packages, such as radiosity, caustics, reflections, and volume lights.

Some of the high end animation tools that Anim8or lacks are inverse kinematics (simplifying character movement), model physics (gravity, bouncing, etc), collision detection, mesh deformation or morphing (moving lips and faces, squash and stretch), particle generation and effects (smoke, fire, water, etc), animated textures and animated backgrounds. Many people have found clever ways around some of these limitations, the most famous of these being the Terranim8or application. Its features are too numerous to mention, but it can be found here <http://biederman.net/leslie/terranim8or/terranim8or.htm>.

The other downside of Anim8or in the animation department is the inability to export animations. While it can export models, any animations set up in Anim8or will not accompany the model. Neither can it import animations.

Stop blaming your tools and get to work!

For the average newbie, the list of cants sometimes gets frustrating, as we want to start giving Pixar and Dreamworks a run for their money as soon as possible. Anim8or has so many excellent features to offer that your skill as a modeler and animator will have to proceed quite far before you find yourself needing (not wanting) a higher end and more expensive package. Anim8or is the best starting point for hobbieist and novices in the 3D computer graphics/animation world. Remember, even Bob Vila started with just a hammer, screwdriver and saw.

Jargon

So you're new to the forums, and new to 3D. And you're hearing people use a bunch of big words, that you don't know, you look it up in the dictionary, but its meaning is either not there, or something that seems really out of place in the sentence that person used it in. These words, are all the words common only to CG. So how do you learn what they mean? Well, you have two choices, you can wait a few months, learning by experience, and asking around, or you can simply open up this magazine, and scroll down to these few pages. Before continuing, please note that a lot of these things are not in anim8or, if they were, you could easily look up what they meant in the manual. These are just a list of words used in the forums when people are comparing something, or adding a note on different methods of modeling. Please don't e-mail Steve and request these features from him, most of them have already been requested, and are almost over requested.

Meta balls: commonly used in modeling, makes modeling organic objects much easier. They come in other shapes as well. They can also be used for making streaming liquid. In this case, they are called meta particles. Meta balls and meta particles simply merge when they come into close enough contact. The closer they are, the more of there faces will merge. Anim8or does not yet support meta balls.

Boolean subtraction: think of it as putting a stamp into clay. For example, u have a block of clay, and a sphere made of wood. Imagine you pushed that sphere into the block of clay, than you take it out, obviously, it will leave an impression of where you put the wooden sphere. This is pretty much what boolean is, except it happens in 3D, without any clay. Anim8or does not yet support Booleans.

IK: Short for "inverse kinematics". Currently anim8or uses forward kinematics. These are ways of moving bones in a figure. Inverse kinematics is said to make animating bones much easier. Basically, it works some what like this. Use your left hand, to grab you right wrist. Then, with the left hand (and making sure your right arm is completely loose), pull your right wrist towards your left. Notice how all of the joints above the wrist, such as the elbow and shoulder bend to help you move your right wrist to its destination, that's pretty much how inverse kinematics work. Anim8or does not yet support inverse kinematics (but that may change very soon).

Forward kinematics: It's the way of moving bones anim8or currently has, go into figure mode to play around with it, better to do than to listen.

Ray tracing: A way to render shadows and reflections and such. Basically, It calculates where each ray of light would go and how it will bounce off certain objects, and where it would be blocked by objects. Be careful with raytracing, it can greatly increase the render time for a scene, but it is needed if you want a good one. Anim8or currently supports ray tracing, but it's limited to shadows.

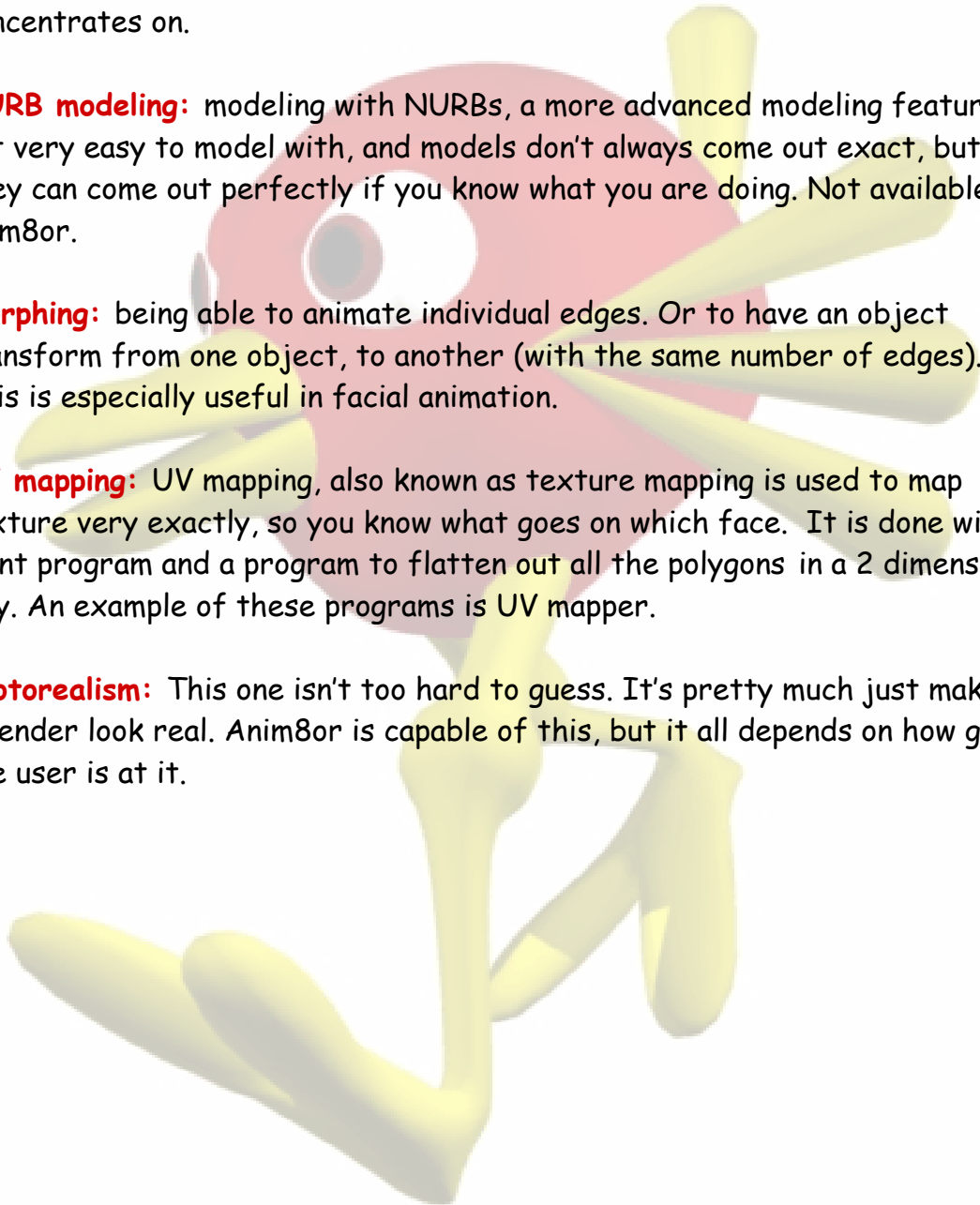
Poly modeling: modeling with polygons. This is the type of modeling anim8or concentrates on.

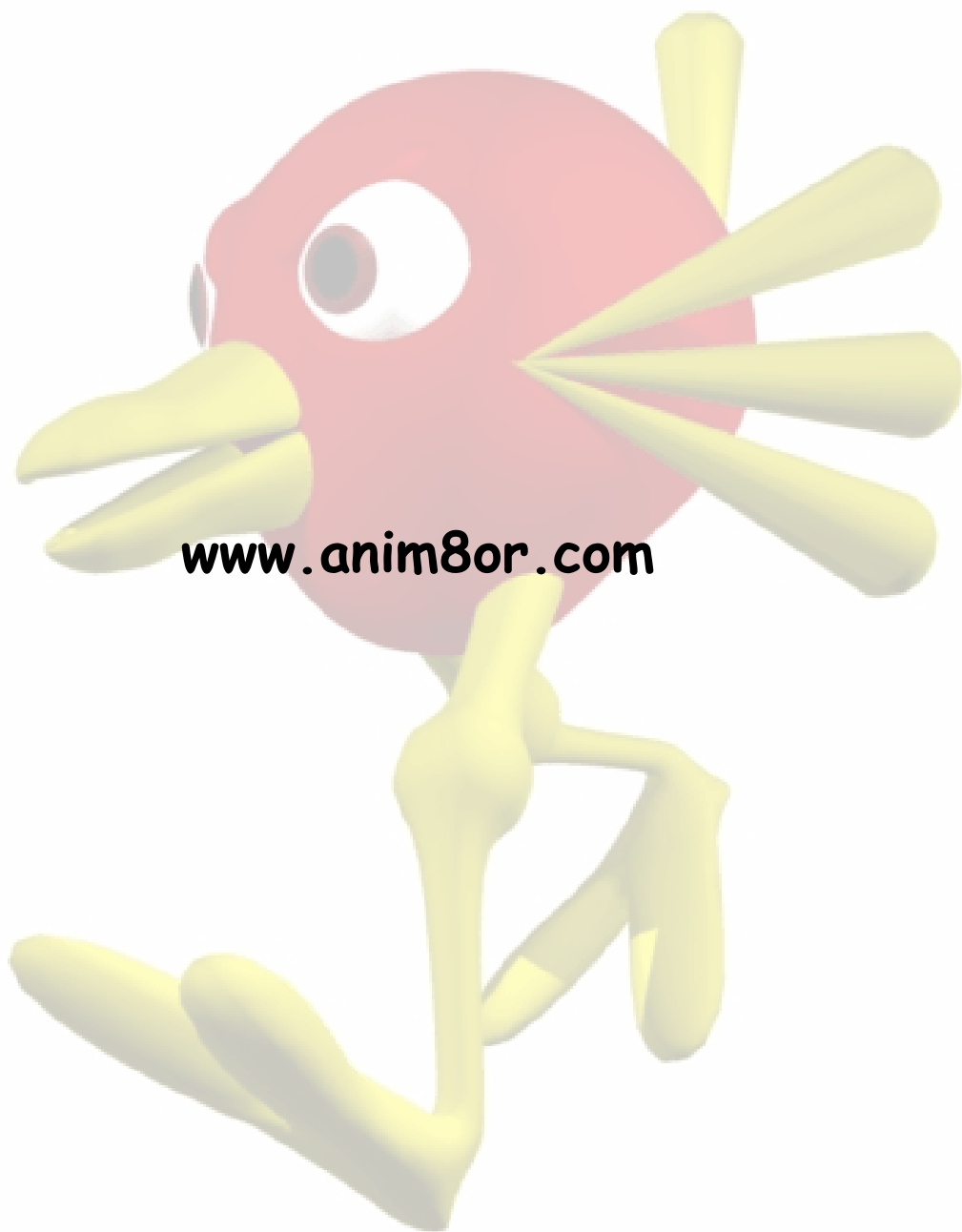
NURB modeling: modeling with NURBs, a more advanced modeling feature, not very easy to model with, and models don't always come out exact, but they can come out perfectly if you know what you are doing. Not available in anim8or.

Morphing: being able to animate individual edges. Or to have an object transform from one object, to another (with the same number of edges). This is especially useful in facial animation.

UV mapping: UV mapping, also known as texture mapping is used to map texture very exactly, so you know what goes on which face. It is done with a paint program and a program to flatten out all the polygons in a 2 dimensional way. An example of these programs is UV mapper.

Photorealism: This one isn't too hard to guess. It's pretty much just making a render look real. Anim8or is capable of this, but it all depends on how good the user is at it.





Texture mapping anim8or models and using them in dark basic

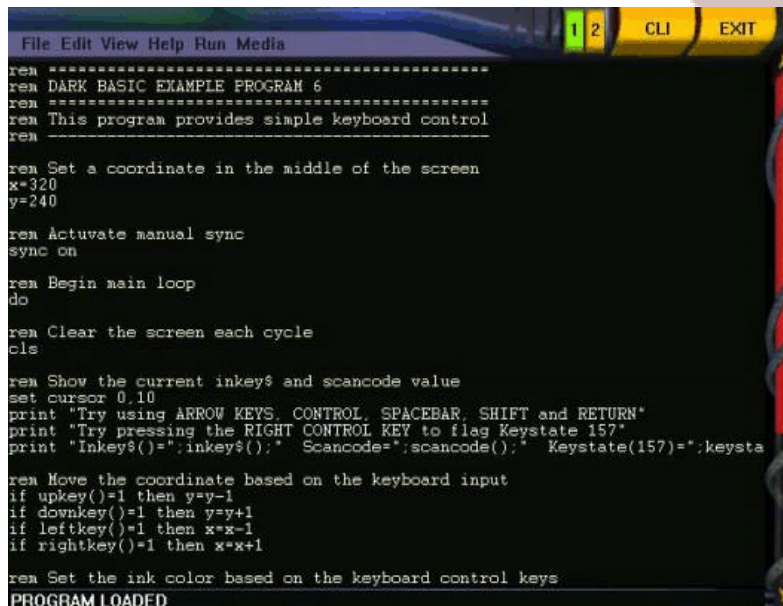
By Joe Biederman aka "Rounder"

This article will cover creating models with anim8or, texture mapping them with paint and UVMapper, then loading the texture mapped models into dark basic. You will need basic knowledge of anim8or and dark basic, don't worry if you have never used UVMapper, I will show you everything you need to know. Let's get down to business.

What you will need

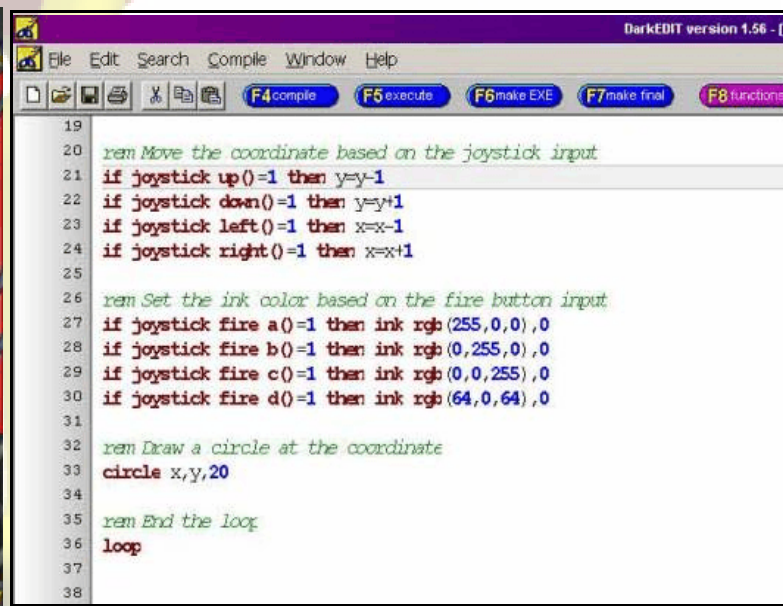
1. Anim8or (Free download from <http://www.anim8or.com>)
2. Dark Basic (Try free for 30 days at <http://www.darkbasic.com>)
3. UVMapper Classic (Free download <http://www.uvmapper.com>)
4. MS Paint (Included with MS Windows)

Before we start it is important to note that I use "Dark Edit" for editing my dark basic projects. It Is a much easier to use interface for Dark Basic. Let's take a look.



```
File Edit View Help Run Media
rem *****
rem DARK BASIC EXAMPLE PROGRAM 6
rem *****
rem This program provides simple keyboard control
rem *****
rem Set a coordinate in the middle of the screen
x=320
y=240
rem Activate manual sync
sync on
rem Begin main loop
do
rem Clear the screen each cycle
cls
rem Show the current inkey$ and scancode value
set cursor 0.10
print "Try using ARROW KEYS, CONTROL, SPACEBAR, SHIFT and RETURN"
print "Try pressing the RIGHT CONTROL KEY to flag Keystate 157"
print "Inkey$()=";inkey$(); " Scancode=";scancode(); " Keystate(157)=";keysta
rem Move the coordinate based on the keyboard input
if upkey()=1 then y=y-1
if downkey()=1 then y=y+1
if leftkey()=1 then x=x-1
if rightkey()=1 then x=x+1
rem Set the ink color based on the keyboard control keys
PROGRAM LOADED
```

A screenshot of the stock DB editor, very childish and extremely clunky to use!



```
DarkEDIT version 1.56 - [
File Edit Search Compile Window Help
F4 compile F5 execute F6 make EXE F7 make final F8 functions
19
20 rem Move the coordinate based on the joystick input
21 if joystick up()=1 then y=y-1
22 if joystick down()=1 then y=y+1
23 if joystick left()=1 then x=x-1
24 if joystick right()=1 then x=x+1
25
26 rem Set the ink color based on the fire button input
27 if joystick fire a()=1 then ink rgb(255,0,0),0
28 if joystick fire b()=1 then ink rgb(0,255,0),0
29 if joystick fire c()=1 then ink rgb(0,0,255),0
30 if joystick fire d()=1 then ink rgb(64,0,64),0
31
32 rem Draw a circle at the coordinate
33 circle x,y,20
34
35 rem End the loop
36 loop
37
38
```

A screenshot of the Dark Edit DB editor.

As you can see Dark Edit is much easier to use, but I digress, whichever editor you choose to use, the code will work just fine if you paste it in. If you don't have dark edit, don't worry! Now let's take a look at what our workflow will be like.

1. Create our object in anim8or
2. export our object as an .obj file
3. create base texture map and append uv cords to our model with uvmapper
4. Edit texture map with paint
5. import model back into anim8or
6. apply texture map
7. export as .3ds file
8. load and texture object in darkbasic

During this process you may get sharing violations between the programs when editing the texture map, for this reason it is recommended that you close programs and open them as needed. After all you should have shortcuts to these 4 important programs on your desktop anyways ;)

For this tutorial we will be putting all files into a single directory, I like to create folders inside my documents, this is not normally good practice but hey, this is a tutorial.

For this article we will be creating a turret with 2 barrels, that will look like this.

Anim8or



Dark Basic



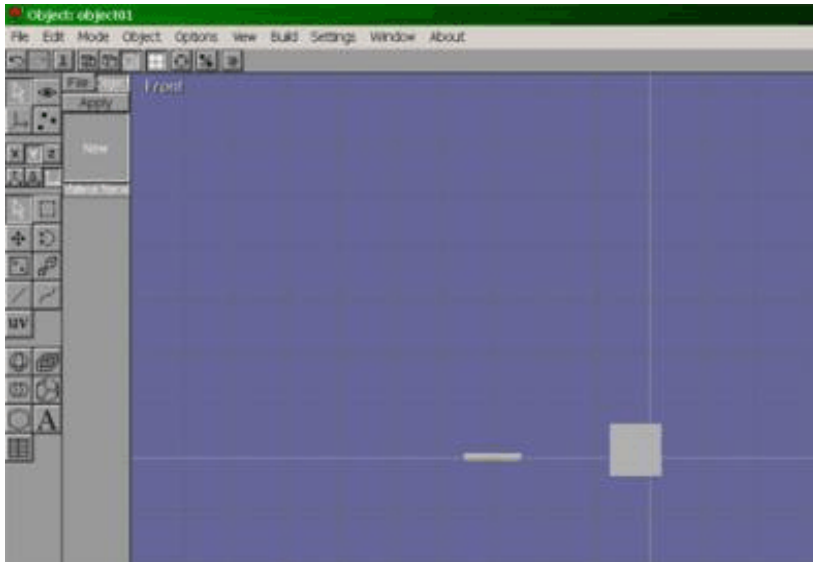
Now let's get started!

Fire up anim8or and create 2 primitives, a cube and cylinder with the following dimensions

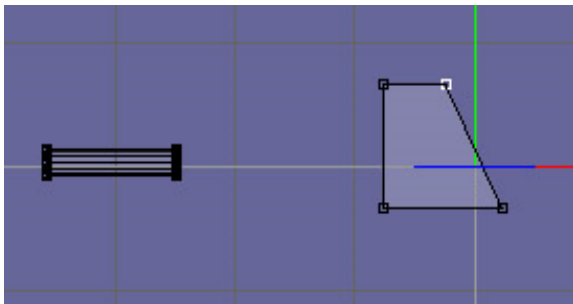
- Cube 10X10X10 1 division each axis
- Cylinder 2 X 11, 12 lon, 1 lat

CONVERT THEM BOTH TO MESHES NOW!

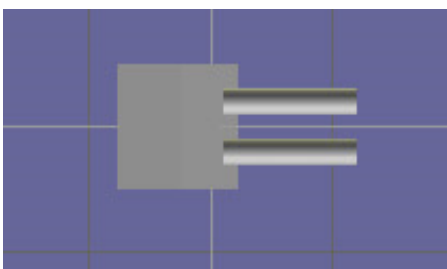
You should have something that looks a little like this



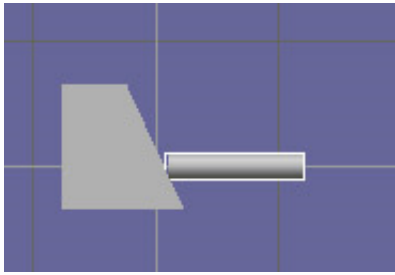
Switch to point edit mode and move the points on the cube so they look like this



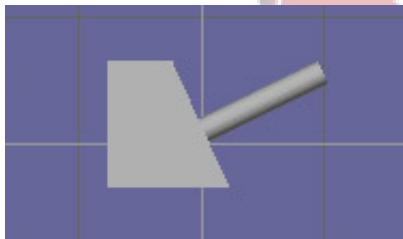
Now let's get the barrels into place. Go back to anim8ors select and edit mode, and view your object from the top. Slide the barrel along the x-axis until it is in front of your turret. Copy the object and slide each along the y-axis a bit. Turn snap grid on with a setting of 1 to help line them up quickly! Don't worry about how close it is along the x, just get them lined up well from the top. You should end up with something that looks a little like this.



Now switch back to front view and you should see



Rotate both cylinders a bit around the z-axis. 25 degrees or so should do it. Once you have rotated the barrels, select both cylinders, you may have to switch to top view so you can select both cylinders. Position them so they look something like this.



Once you are satisfied with the layout of the primitives on your turret, select all 3 objects and group them [build>group]. With your single object selected join the solids [build>join solids.]

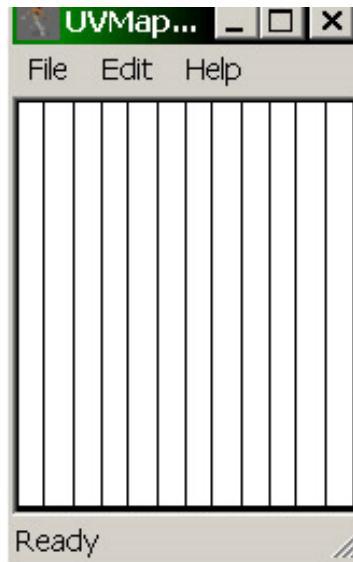
Before we export our object, make sure it is not rotated at all around any axis. Now export your object to a .obj file [object>export] You have to choose the file type from the bottom of the dialog box, give it a name, I called mine turret_export. Put it in the folder you will use for all files in this tutorial. We are done with Anim8or for now, you can close it and take a break.

Now let's have some fun with UVMapper.

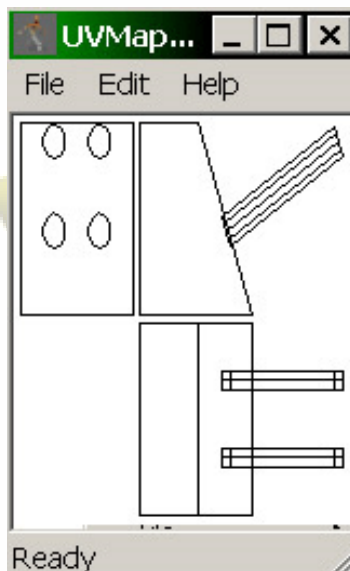
When you start UVMapper it does not look like much.



Select File>load model, you will get a popup window that gives you some stats on your model. When your model first opens it looks something like this.



Now goto edit>new UV map, choose box, uncheck the split front/back option. You should then get a map that looks similar to this.



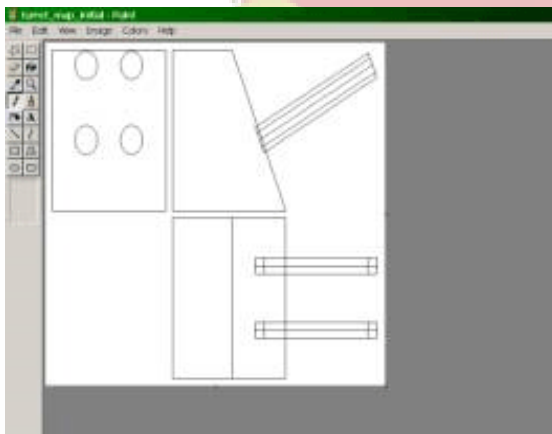
If your image looks like the one above then you are ready to proceed, if it is drastically different then you need to go back and see what went wrong, as long as it is close you are ok!

Now that we have our basic texture map, we need to export 2 things. First we need to export the above texture map so we can edit it in paint. You can do this by selecting [file>save texture map] set the size to 512x512 and do

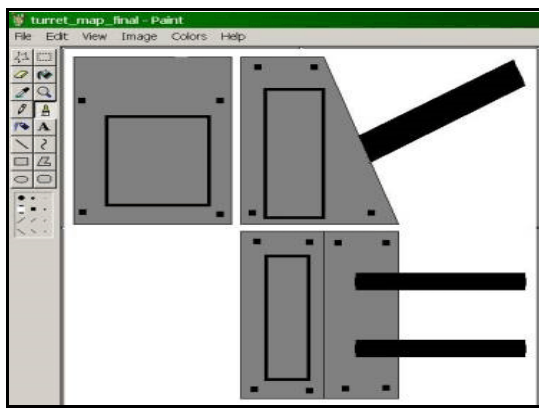
not check any other options. I called mine turret_map_initial. We also have to export the model of the turret with the new UV coordinates that UVMapper generated. You can do this by selecting [file>save model] The only options you should have checked are

- * Export Normals
- * Export UV coordinates
- * Export materials
- * Export UVMapper regions

I called mine turret_mapped. We are now finished with UVMapper, you can close it and fire up Paint and load your map. You should be looking at Paint, with a graphic similar to the following.



Use the eraser tool to get rid of the both sets of circles. Then use the fill tool to make the barrels black and the turret grey. Then use the line tool and/or box tool to add some features to your turret, get creative, it does not have to look like mine.



Once you are satisfied with your turrets paintjob, select [file>save as] DO NOT SAVE YET!

This is a very important step, failing to do this will cause an error and the inability to load your texture in anim8or. At the bottom of the save as dialog box, choose "save as type" and choose "24 bit bitmap" NOT 256! Give it a different name then the blank map(so you can go back and experiment later!), I called mine texture_map_final. We are done with paint and we are also getting close to loading our object into darkbasic, but first we need to get it back into anim8or, texture it and export it as a 3ds.

Fire up anim8or and import your turret model, the one **WITH** the UV coordinates, remember the one we saved from UVMapper! Create a new texture in anim8or, now load your painted map up as the diffuse component of the texture. **Apply the texture to the object WITHOUT USING ANIM8ORS UV TOOL!!!!!!**

If you have followed closely you should have a nice texture mapped model on your screen! Mine looked like this. .



If you rotate your object around, you will see some errors, on the bottom you see black lines from the barrels, and the barrel ends are not black. The option we unchecked in UVMapper earlier (split front/back) would have generated a more complex map thus allowing us to really paint "every" surface, but we are keeping it simple! You now have a fully mapped object you can use in your anim8or scenes, and you can export your object as a 3ds file to load into dark basic or any other application for that matter! I named mine turret. If you used the same names I did in the article, AND you put all your files into a single directory, you can paste the following code into dark basic and it should work. You will need the stone.bmp, located in the file pack

below. (or use any other texture suitable for the ground) If you used your own file names, then you need to replace 3 things below.

1. stone.bmp
2. turret_map_final.bmp
3. turret.3ds

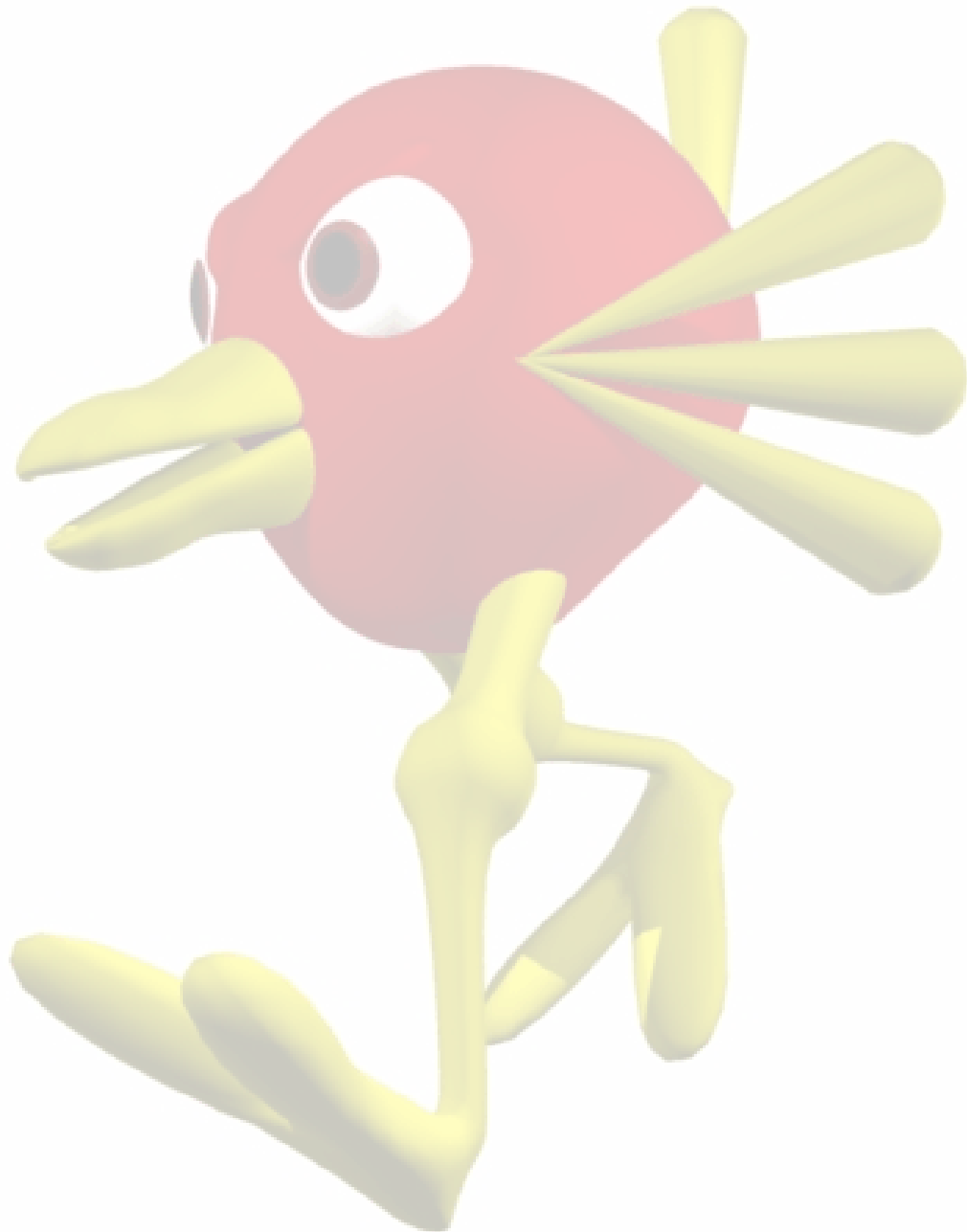
Get all the files for this tutorial including the dark basic code and an executable to run if you don't have dark basic!

<http://www.biederman.net/joe/dbarticle.zip>

*****begin DB code*****

```
sync on: sync rate 60
set display mode 1024,768,32
  make matrix 1,10000.0,10000.0,25,25
  randomize matrix 1,150
  load bitmap "stone.bmp",1
  get image 1,0,0,256,256
  delete bitmap 1
  prepare matrix texture 1,1,1,1
    load bitmap "turret_map_final.bmp",2
    get image 2,0,0,256,256
    load object "turret.3ds",1
    position object 1,110,15,110
backdrop on
color backdrop 1
do
if upkey()=1 then x#=newxvalue(x#,a#,2) : z#=newzvalue(z#,a#,2)
if downkey()=1 then x#=newxvalue(x#,a#,-2) : z#=newzvalue(z#,a#,-2)
if leftkey()=1 then a#=wrapvalue(a#-2)
if rightkey()=1 then a#=wrapvalue(a#+2)
cx#=newxvalue(x#,wrapvalue(a#+180),100)
cz#=newzvalue(z#,wrapvalue(a#+180),100)
cy#=get ground height(1,cx#,cz#)+50
position camera cx#,cy#,cz#
point camera x#,y#,z#
sync
loop
```


****end DB code****



RESERVED FOR ADD

Contest Entries

Here is where we review what you've entered in our contest. There are two categories in the competition, one is rendering, one is modeling, the winner of each gets their model/render on the cover of the next issue. There are no classes, so n00bs and experts are all in the same race. Tough noogies.

~~~~~RENDERS & SCENE SETUPS~~~~~

Sword Cuff

by Dion

for a larger image go to

<http://www.dion.raxxisbak.com/images/SwordCuff2.jpg>

This is a very nice scene setup, and the lighting's pretty good too. This entire scene has sort of a resident evil meets final fantasy feel to it. It combines futuristic with medieval. And the dark soft shadows do a very nice job of giving it a creepy feeling. The specularity was set just right, and the choice of materials is very interesting. Also, it includes something that all too many people seem to forget that most rooms have, those weird borders at the bottom of the room. One of the only problems with this render is that the bump maps are too deep. Very nice job, and the extra attention to details definitely helps it.



8.5/10

Untitled

by lasukie-kai

for a larger image go to

<http://img18.imageshack.us/img18/840/test10.jpg>

This is a very nice scene setup, again, it pays attention to *some* of the little details, mainly just the border thing at the bottom of each wall. Too many white lights were used though, and it gives it somewhat of a washed out effect. Good job on the shadows, they mix "monte carlo" with hard. I really like the red under the jewel to create the effect of refraction. It's just a red light, but it really helps the scene. The scene kinda makes me wonder, who would leave all these things on the floor?



7/10

BMW silver

by The Armenian

for a larger image go to

http://www.cslab.uky.edu/~lteri2/wips2/bmw_silver2.jpg

Not much too say about this as a render. Pretty good light setup, and a good mixture of monte carlo and hard shadows. The environment map doesn't help it too much, seeing as how it doesn't fit the environment. And not too many points added for scene setup, as there isn't one. It's a great model, but nothing too spectacular in the render category.



7.8/10

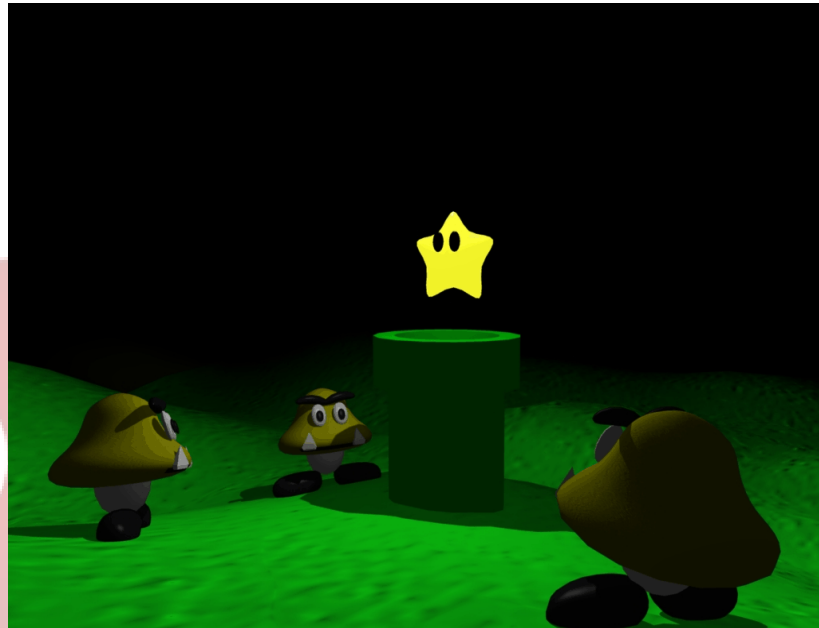
Goomba

by rockintom99

for a larger image go to

<http://www.moronymous.gotdoof.com/goomba.jpg>

This scene isn't much of a render. It's just one local light casting shadows. And they aren't even soft shadows, like every local light should cast (unless hard shadows are necessary for the effect). The bump mapping on the mushrooms adds a very nice effect. However, the bump mapping on the ground was too big, it should have been tiled to give a more grassy or clumpy effect. Even though the lighting is pretty bad, it's a very nice scene setup. I'm not a big Mario fan, so I don't really know what the mushroom people are called (goombas?). But it's a very original scene. And the terrain definitely adds to it.



5.9/10

Untitled

by TC

for a larger image go to

<http://img6.imagetown.net/7488190.jpg>

This isn't too great of a render it's just one spotlight casting one shadow. And the scene setup isn't that great, he's supposed to be on stage, but it just seems like a wooden box. Not to many details in this one. Sorry, but like I sad before, not that great a render.

2/10



King of the hill

by Dodo_bird

for a larger image go to

<http://www.3dfightclubforum.com/phpBB2/files/kingofthehill.jpg>

This is both a nice scene setup, and a nice render. The light setup is pretty good, and very nice job on cell shading. The bright colors and cute character and trees are reminiscent of a kitty cartoon. And looking at it, you can't help but smile. There are only two problems with this one. One, is that I can see the end of the terrain, which takes away from the feeling that he lives in a world, as opposed to a floating piece of terrain in space. And the other, is that the sun is outlined with black, even in cartoons it's not this way, the source of light should never be outlined. It also has shades, which it shouldn't, since it's a source of light. Other than that, it's really great, and very amusing to look at.



9/10

Untitled

by dcanfield87

for a larger image go to

<http://www.pix8.net/pro/pic/1189ZsDHO/15987.jpg>

There's not much to say about this one. There's no scene setup, just a model on the default grid, and there is only one light casting soft shadows. Which doesn't make for much of a light setup. The red shades on the glasses cast black shadows, this would have been a good place to score some points with a trick. Sorry, but this doesn't do to well in the render category.



4/10

Bot 1

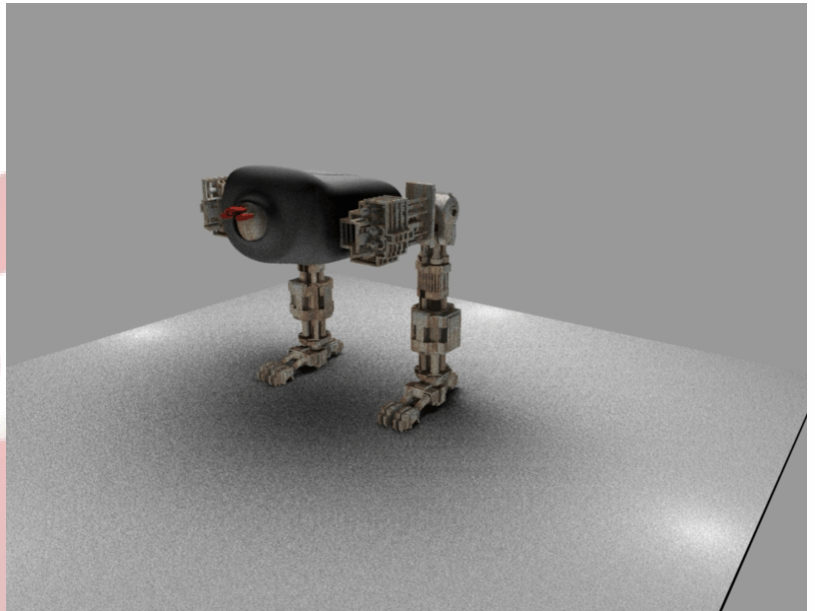
by kullveras

for a larger image go to

http://img78.photobucket.com/albums/v252/kullveras/bot_1.jpg

This isn't really a great light setup. It seems like five lights were used, but they weren't very cleverly placed. However, because of the shadow they cast, it gives a really nice effect. The rust on the bot definitely helps the render. It's a mech type thing, so I can't really say I can see the end of the world. As it could just be standing on a raised platform. My only problem with this, and I'm still trying to decide

whether it's good or bad, is the shadow. Mainly, because in real life, the shadow would never be like that. But the effect it has is awesome, so I guess I'll just consider it good.



8/10

Spider ball

by moley

for a larger image go to

<http://img6.imagetown.net/23246270.jpg>

This is an ok render. Not much of a scene setup, but on the plus side, at least I can't see the end of the world. I think only 3 lights were used. Unfortunately, they were bright white, it gives spiderball too much of a washed out effect.



6.8/10

Mercedes Clk

by The Armenian

for a larger image go to

<http://www.cslab.uky.edu/~lteri2/wips2/mercedesClk.jpg>

This, is a pretty good render. But it's not really amazing. The model is awesome, and it's really really hard to look at this pic and not give extra points because of the model. I have to remember, this is the render category. And as a render, it's not all too special(but it is a *little* special). I like the mix of shadows, soft and hard, and it's an ok light setup, but something's just not right about it, can't quite put my finger on it. Also, the environment map doesn't fit the scene. But other than that, nice job.



8/10

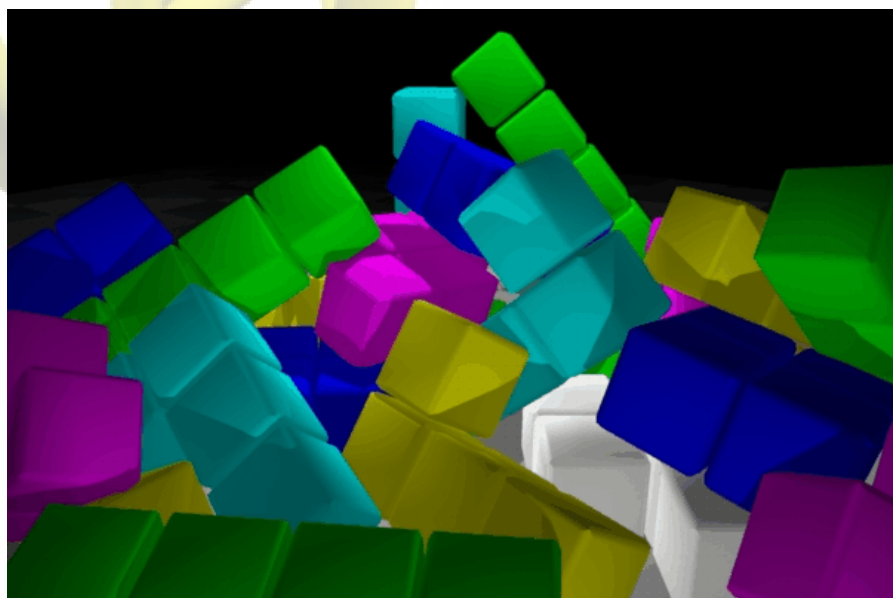
Tetris

by Captianbizarro

for a larger image go to

<http://img7.imagestown.net/82257130.jpg>

It's a pretty nice scene setup, must have taken a little while, but it's not a very good light setup. Also, the hard shadows make it seem like everything is glitchy. Sorry, but the lighting and shadows bring it down.



6/10

Untitled

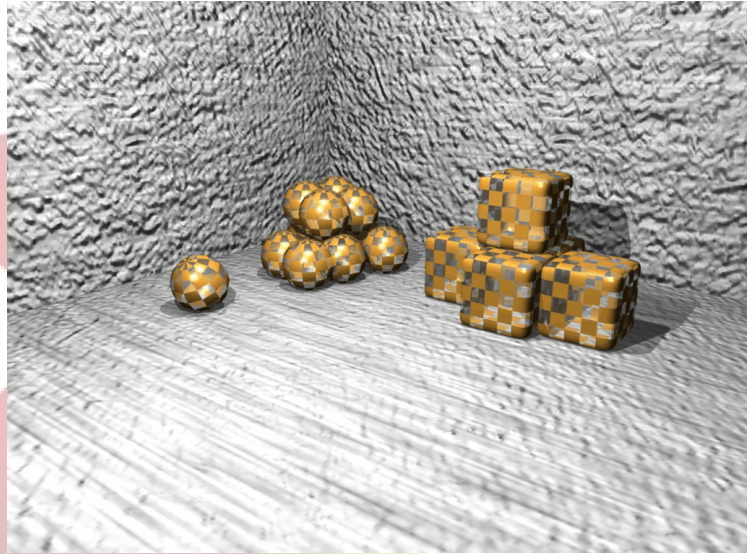
by mr.anonymous

for a larger image go to

~~~~~

This isn't much of a render, the light setup isn't that good, and all objects are casting hard shadows. As for scene setup, well, it's definitely original, so he gets points for that. But other than that, this scene isn't all that great.

4/10



### Untitled

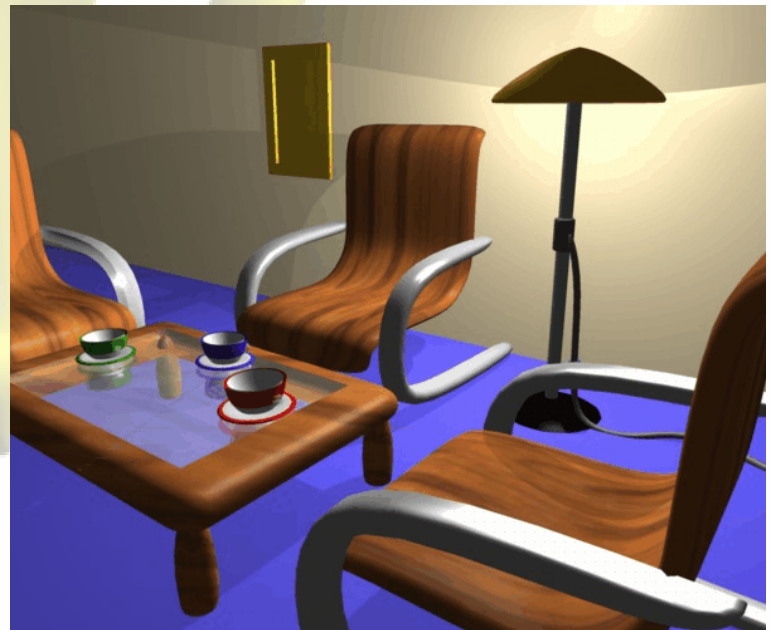
by TC

for a larger image go to

<http://img3.imagestown.net/17223999.jpg>

It's not much of a light setup. It seems like just one local light casting shadows. And they're hard shadows. All local lights should cast soft shadows (unless hard shadows are necessary for the effect). The scene setup is pretty nice, though the carpet needs a bump map to make it seem like a carpet. Very nice job with the reflections on the glass though, I'm not quite sure if that's an environment map, or that technique Loyde used a long time ago. Overall, It's a descent scene setup.

7/10



## ~~~~~Modeling~~~~~

### Untitled

by lasukie-kai

for a larger image go to

<http://img18.imageshack.us/img18/840/test10.jpg>

I like the sword, very well done. The gun however reeks of over subdivision.

The subdivision level should probably have been set to one as opposed to two. But it's still not that bad.

7/10



### Fatman

by RudySchnieder

for a larger image go to

<http://img31.exs.cx/img31/8365/Fatman1.jpg>

This is a very good model. Nice job paying attention to all the little details. By which I mean the holes on the end for hooks to go into, and the folds on the tale of the bomb (those must have taken a while). The bumpmapping is also very good. Nice job on this one.

8/10



### **BMW Silver**

by The Armenian

for a larger image go to

[http://www.cslab.uky.edu/~lteri2/wips2/bmw\\_silver2.jpg](http://www.cslab.uky.edu/~lteri2/wips2/bmw_silver2.jpg)

WOW, this is a really nice model. Everything is so detailed, it's as if nothing has been left out. You can even see the interior (if you look hard enough). Nice job on everything. There isn't much to comment on, so I won't.

9.5/10



### **Untitled**

by dcanfield87

for a larger image go to

<http://www.pix8.net/pro/pic/1189ZsDHO/15987.jpg>

Not too much too say. It's not a very detailed model, so I can't comment on that, but there's not too many things wrong with it either. The only problem I notice is that it doesn't have those screw at the ear piece so that the glasses can fold.

6.8/10





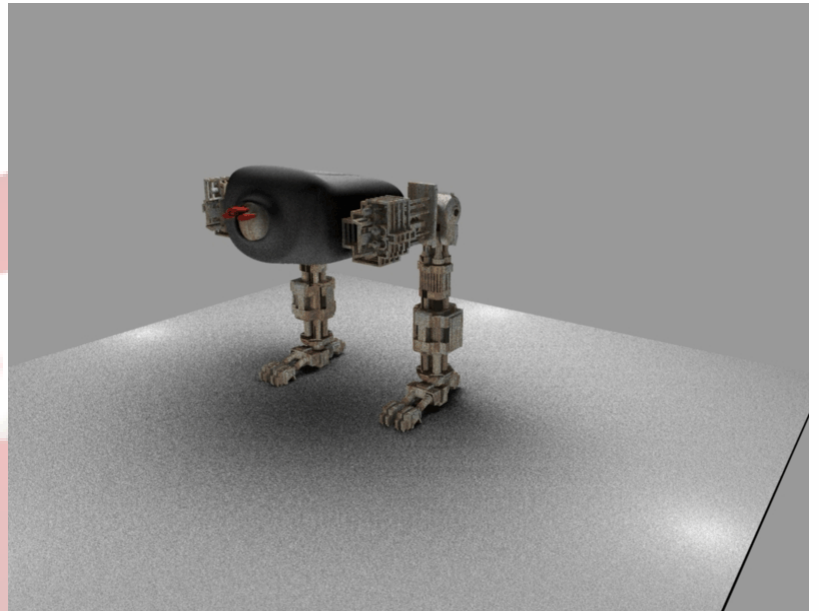
## Bot 1

by kullveras

for a larger image go to

[http://img78.photobucket.com/albums/v252/kullveras/bot\\_1.jpg](http://img78.photobucket.com/albums/v252/kullveras/bot_1.jpg)

Very nice job on this model. The legs were freakishly well detailed. And the rust definitely adds to the effect. My only problem with this model, is that the legs don't seem to fit the body. The legs are these squarish mech type legs, and the body/head, is smooth and seems better adapted for under water.



9/10

## Mercedes Clk

by The Armenian

for a larger image go to

<http://www.cslab.uky.edu/~lteri2/wips2/mercedesClk.jpg>

Wow, this one is better than the BMW. Awesome job. I especially like the rims. Everything is perfect, and when everything is perfect, there's no point to commenting further on it.

10/10





## Untitled

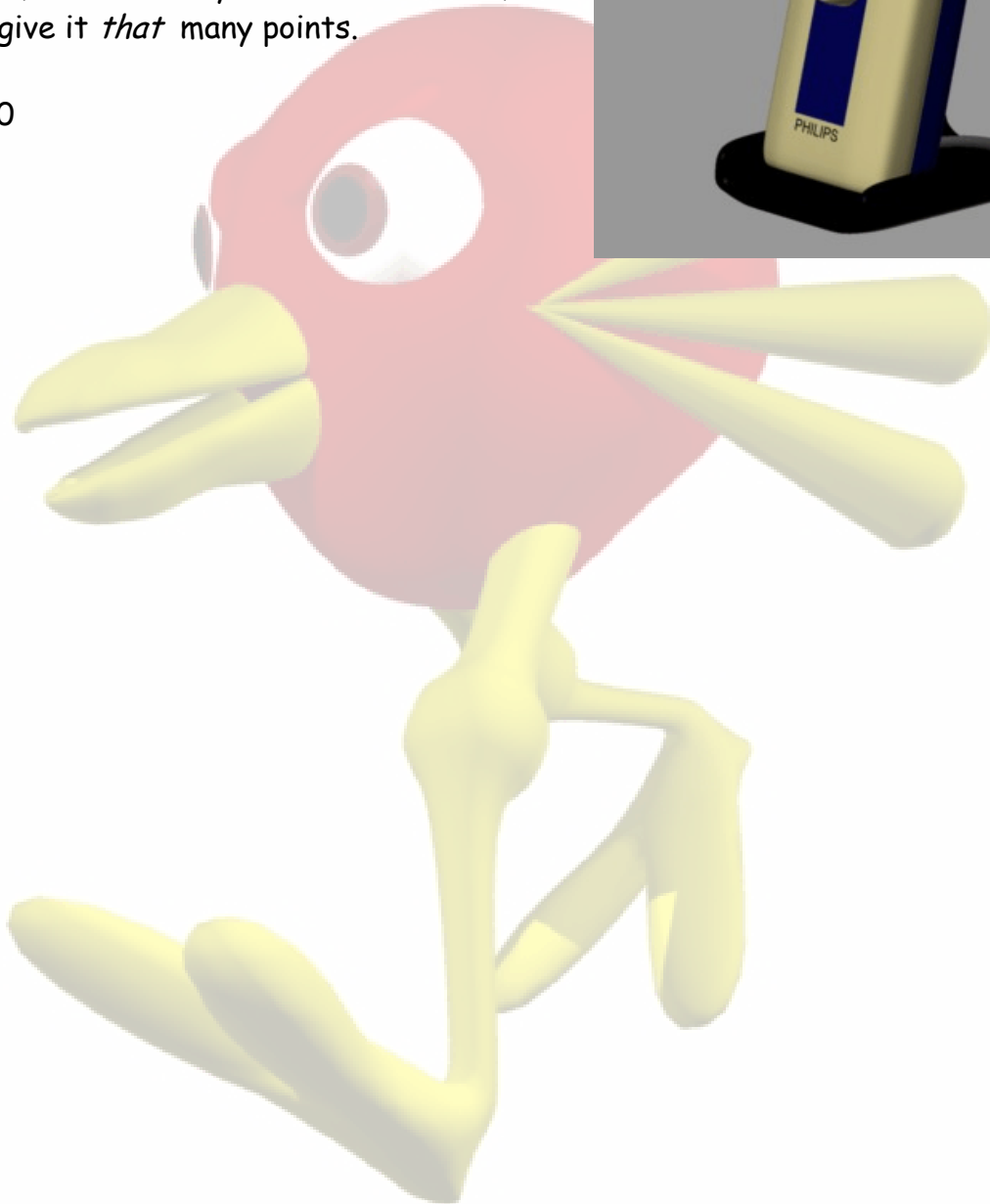
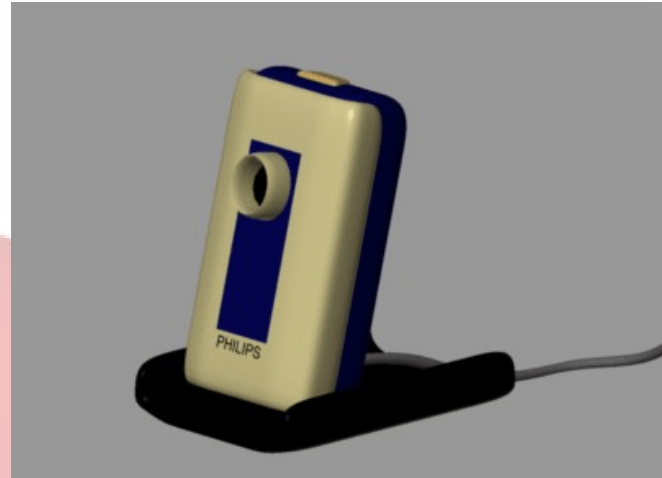
by TC

for a larger image go to

<http://img3.imagestown.net/14655104.jpg>

Nothing to really comment on. I don't have a picture of the model of camera he used, but I bet it looks just like it. Though even if it does, it's not really too hard to model, so I can't give it *that* many points.

6.8/10



**Editors' comments:**

I hope you've enjoyed this first issue of the bi-monthly anim8or magazine "dotAN8" this is the result of weeks of hard work. Not only was I the editor, but I was also the judge for the contest, and wrote some of the interview questions with Steve. I'm very sorry for some of the format problems with this magazine (like lack of numbers), but it's too late to add them now, the software gets all glitchy. Anyway, rest assured, the next issue will be much better, and there *will* be a next issue. Again, I hope you've enjoyed reading it, and any feedback would be greatly appreciated.  
tripleetails22@hotmail.com

thanks,  
rufsketch1

**credits:**

jeb-light tutorial  
rounder-texturing tutorial  
BOB\_ITs- help with the interview  
Fishman- n00bs view  
rufsketch1-editor  
Steve- made it all possible

