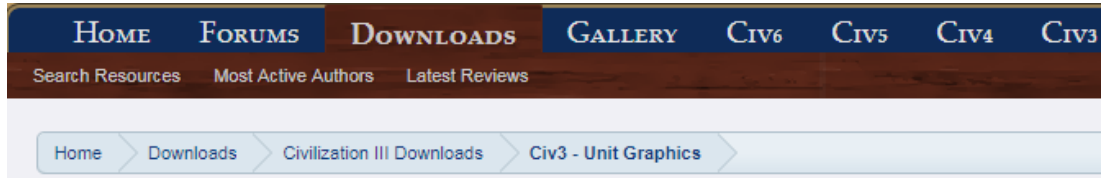


How to convert CivIII gfx-animations to HoI2 sprites

Tutorial I

1. Pick one of the CivIII graphics. A decent and fairly complete list is located here

<https://forums.civfanatics.com/resources/categories/civ3-unit-graphics.23/>



Download it and unzip it anywhere you like.

2. Download [FLICster](#) here
http://www.civfanatics.net/downloads/civ3/utility/FLICster1.0.0.17_FullSetup.zip
and install it somewhere.
3. Open FLICster. It will tell you it cannot locate CivIII directory, but simply ignore it. Then click File > Open... > and navigate to where your CivIII graphics is unpacked.
4. You'll see several .flc files, along with some other files you can simply ignore. Open the file named run.flc
5. A multi-tabbed window will open. In the "View Animation" tab you can check if the animation is the one you were searching for. If so, go to "Export" tab.
6. Click "Export Type" and change it to "Multiple Filmstrip PCX". Also uncheck the "Border" box.
7. Leave the rest of the options unchanged and click Export.

You're done with FLICster. You can safely close it now and open some graphics edition software. Photoshop is nice, but [GIMP](https://www.gimp.org) would do just as good: <https://www.gimp.org>

I use it and never had any problems with it.

1. Navigate to where Flicster unpacked your CivIII animation. You'll see 8 .pcx files, each with a direction marked by a symbol. Looks familiar? That's almost the format we need for HoI, so most of the work is already done.
2. Open any one of them. You'll see a long, HoI-like strip with frames of our animation. Usually around 16 frames, though the number might differ. Looks familiar?
3. First pick the selection tool (shortcut "R") and choose some absurd pre-fixed length (longer than the strip itself, usually 5000px is enough). To choose the height you'll have to count the frames and make them square. I.e. if the CivIII strip is $x \times 136$ px long (with x being the number of frames), then it would have to be 136 high as well. Type those dimensions in tool options, point the cursor to the upper left corner (0,0) and select the area. Once the area is selected choose the <Image> Crop tool and... voila. Double-check that the strip is indeed precisely <No. of frames>*<width of frame> by <width of frame> size, precision is paramount here.
4. Then change the type of the image to RGB. That's important since we'll use a different palette than the one pre-coded. Now change back to 256 colours and make GIMP generate a 256-colour palette for you. The image itself should not change at all.
5. Open the palettes dialog ("Dialogs -> Palettes" or "Ctrl-P"), right-click the new window and select "Import palette" and import a palette from the Image you have currently opened. Let's say you named it "Fighter" - and a new "Fighter" palette is now available through the Palettes window.

6. Double-click it and edit the first two colour tiles precisely the way Sekinoss suggests in P 3.2 „Combining the frames“ of SPRITE MAKING TUTORIAL

HEARTS OF IRON

SPRITE MAKING TUTORIAL

By Sekinoss

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1. Preparation

1.1 Introduction

This tutorial will teach you how to make new unit sprites using 3D models for HoI. This tutorial deals with making a panzer sprite (this case it's a simple Panzer).

It is divided into two sections: The modelling and the implementation. Modelling deals with making a 3D mesh of the Panzer. While Implementation deals with making the final bitmap containing the animation and putting it in the game.

First a word of warning: **Sprite making is a considerable effort and requires time and patience.** At first the learning can be tough, but once you get the hang of it it's actually simple (but not easy). And the results are worth it, too. Read on.

1.2 The HoI Sprite system

There are three directories of great importance in making new sprites for HoI:

GFX\map\units This houses the *.spr files, which are essential in assigning and setting which unit your sprite is meant for.

GFX\map\units\bmp This contains the actual image of the unit to be used/animated in the game.

GFX\palette This houses the palette file to be read by Hol as a reference color to the sprite in the game

SPR files

GFX\map\units contains files of extension SPR, **which can be opened by notepad**. A typical *.spr file would be

```
"T-PANZER A-FIRE C-USA L-1 D-SW.spr"
```

T-PANZER shows the class of the sprite, which in this case is for a panzer. (others include T-MOTORIZED, and so on)

A-FIRE shows what action the sprite is for, in this case is firing south west (others A-STAND and A-WALK)

C-USA shows you what country the sprite is for (others C-JAP, C-GER and so on)

L-1 shows the level of tech advancement this sprite is for, in which here is one (others 2 to 4)

D-SW shows the direction this sprite is firing, which this case is SW (others W, NW, N, NE, E, SE, S)

Inside a typical file of *.spr is

```
Sprite = {  
Bitmap = "T-PANZER A-FIRE C-USA L-1 D-SW.bmp"  
Origin = { x = 24 y = 35 }  
Frames = 14  
Speed = 5  
Palette = "DEF1.bmp"  
}
```

Bitmap shows which BMP file from the *GFX\map\units\bmp* is to be read from.

Origin shows the general location of the sprite in the game world. X is left positive, so decrease it and the sprite will move right and vice versa. Also, Y is upwards positive, so to up your sprite's location in the game increase Y.

Frames are the number of frames meant to be read in the BMP. In this case it's 14 frames, the BMP is horizontally divided into 14 and if the BMP has 896x56, it would have 64x56 as an individual frame in the game.

Speed just shows you the delay of each frame animated. The higher it is the slower the animation plays in the game.

Palette is the reference colors the game uses to color the sprite in the game. This is important but more on that later.

There are 11 essential *.spr files to be present for a unit (to follow the example above):

```
T-PANZER A-FIRE C-USA L-1 D-NE.spr
```

```
T-PANZER A-FIRE C-USA L-1 D-SW.spr
```

```
T-PANZER A-STAND C-USA L-1.spr
```

T-PANZER A-WALK C-USA L-1 D-SW.spr

T-PANZER A-WALK C-USA L-1 D-W.spr

T-PANZER A-WALK C-USA L-1 D-NW.spr

T-PANZER A-WALK C-USA L-1 D-N.spr

T-PANZER A-WALK C-USA L-1 D-NE.spr

T-PANZER A-WALK C-USA L-1 D-E.spr

T-PANZER A-WALK C-USA L-1 D-SE.spr

T-PANZER A-WALK C-USA L-1 D-S.spr

Bitmap Files

Bitmap images of format 256 color BMP are located in GFX\map\units\bmp. As per it's *.spr files, A unit requires 11 of them (refer to the above), each showing it's respective animation..

A **Sprite** is an image which consists of a collection of images arranged horizontally as frames. Each image is treated as a frame of animation in the game. Four frames of 64x56 (64 by 56) will have a final sprite of 256x56, and so on.

Sprite images are contained in GFX\map\units\bmp, and of format 256 color Windows BMP. Here's an example of a 4 frame sprite showing a Pershing doing A-WALK direction SW I made:



It is a general convention Hol that each frame of animation for panzer should be 64x56, though different classes such as ships use larger sizes and so on.

Palette Files

These are just 4x4 256 color BMPs that Hol reads as a color reference. This is located on GFX/palette.

1.3 Tools Required

Here are some tools which you require to make a sprite with this tutorial (those I use), most of which are **DOWNLOADABLE SHAREWARE**:

- a low polygon 3D modelling software (Milkshape 3D - <http://www.swissquake.ch/chumbalum-soft/>)
- an image editor (Paint Shop Pro - <http://www.jasc.com>)
- an animation editor (Animation Shop - bundled with Paint Shop Pro)
- a text editing software (Notepad should suffice)
- any reference images for guidance in modelling the tank

- great patience...

2. Modelling and Recording the 3D mesh

2.1 Modelling a Panzer

First off, let me tell you that this tutorial is not meant to teach the basics of Milkshape modelling. I'll explain a little here and there, but to learn off how to do it solidly I refer you to (and don't laugh on the end result of our home made "tank"):

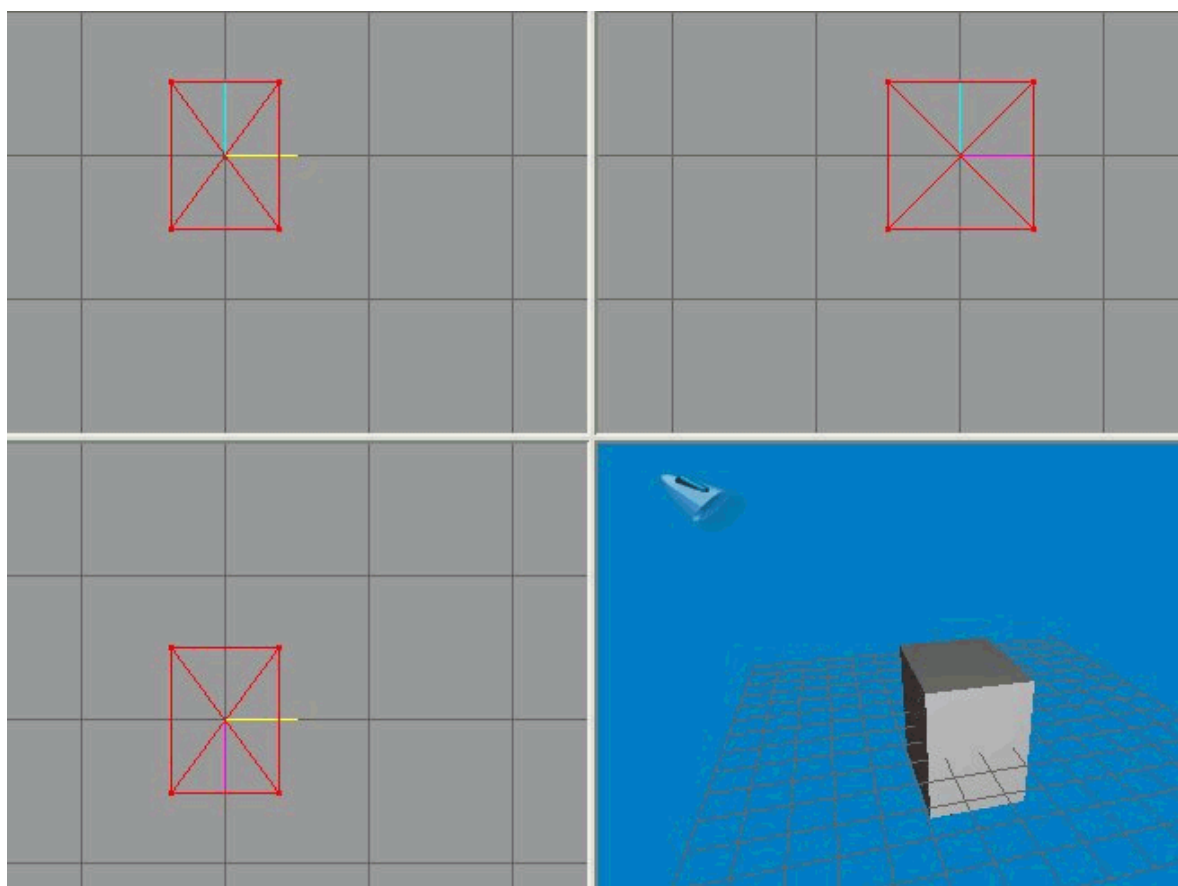
- <http://xu1productions.com/3dstudio/tutorials.html> (The Audi tutorial especially helpful)

- <http://www.swissquake.ch/chumbalum-soft/ms3d/tutorials.html>

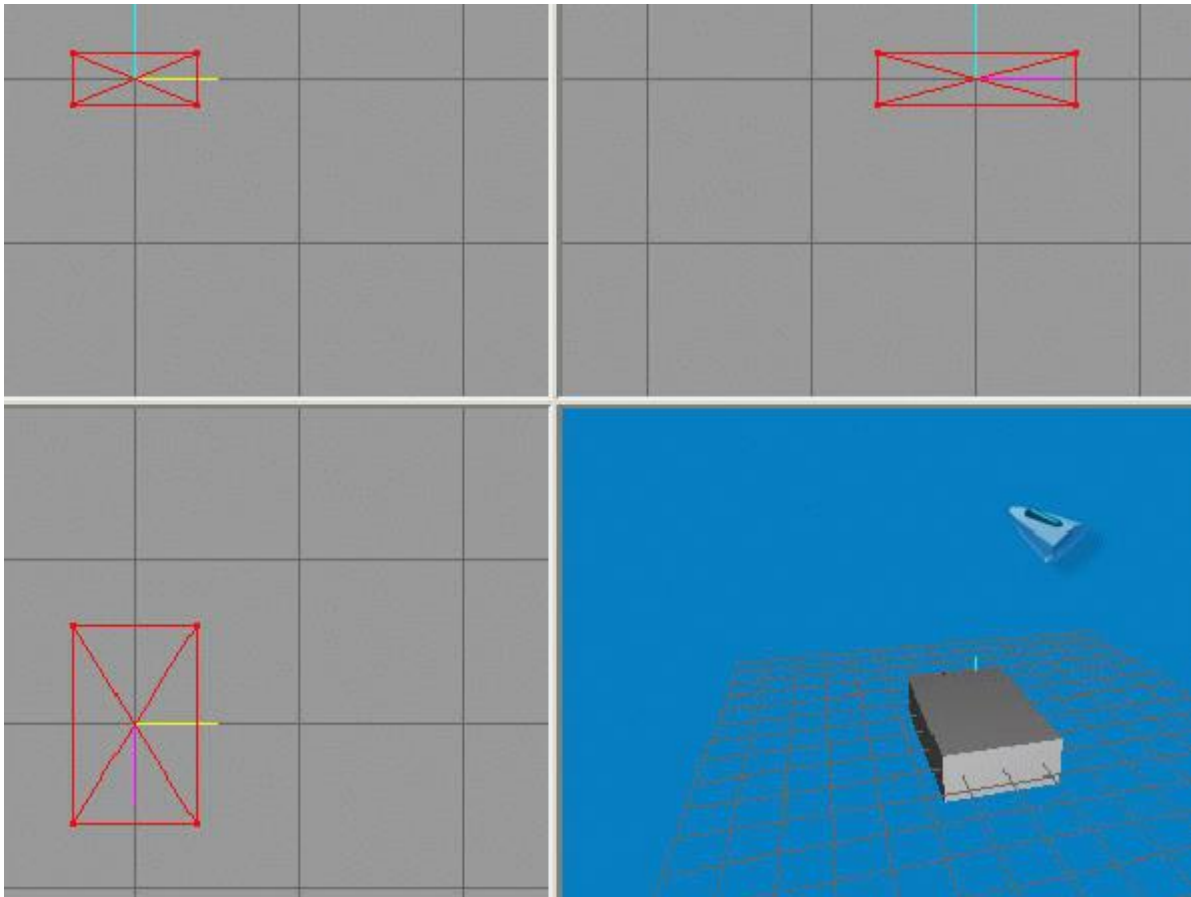
IF you already have an exceptionally good model, skip to the second part of this chapter: animating. This tutorial uses a simple (and ugly) model as an example.

Once you get the basics we're ready to go. Open up Milkshape. The figure we'll make here is just some very blocky Panzer (if you can say so), so it'll be simple and won't win any medals, but it'll work fine as an example. By now I hope you've learn about Vertex, extrude, faces and stuff.

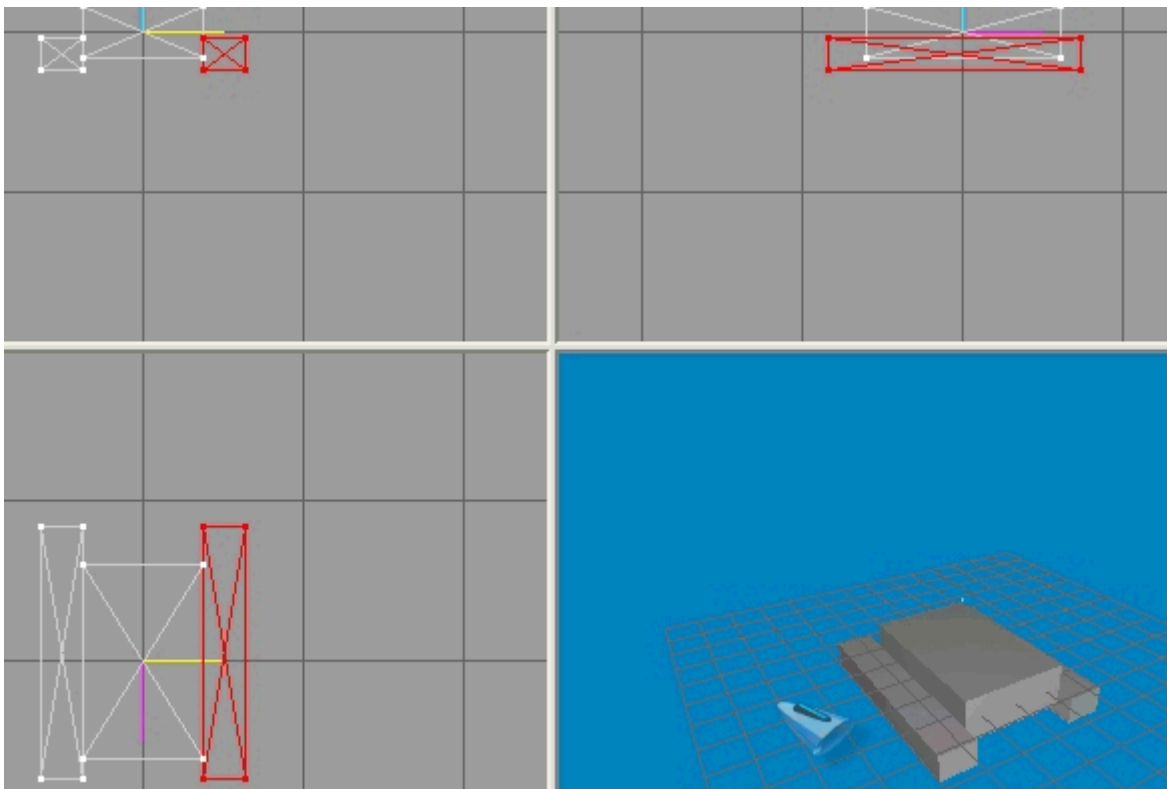
As been suggested, **it is better to model just half of the tank**, and mirror it to get a full tank. Have a look at the toolbar and Click on the model tab, the click box. Use the top view, default in bottom left, and drag some box as it's main body.



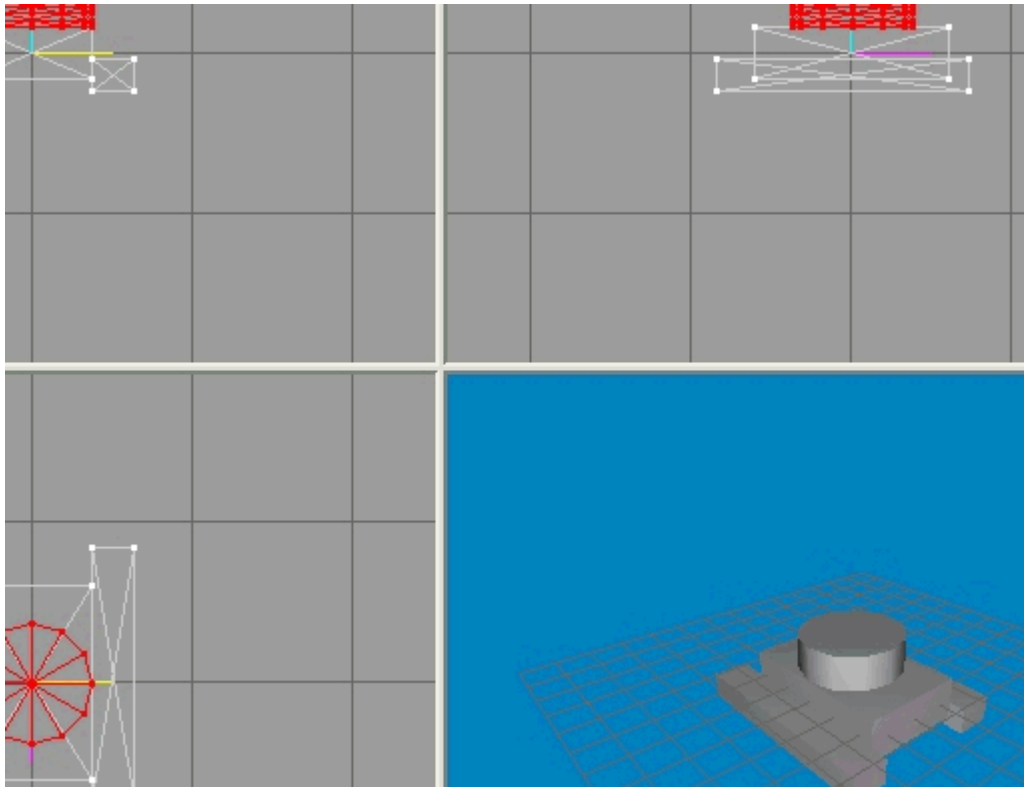
get the scale option, and use the left view to scale it down. You'll have something like



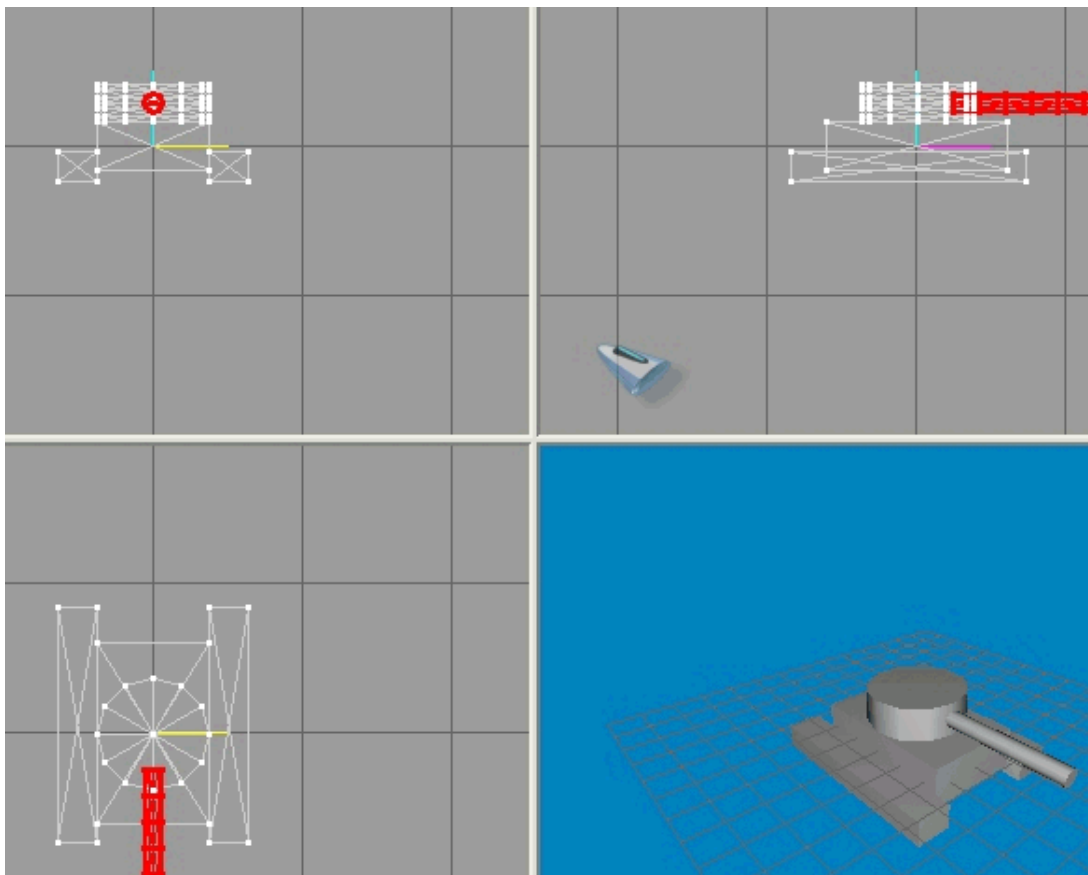
Now drag two more boxes on each side of the body as it's tracks. Position it a bit longer and lower than the main body. Use scale and move tools whenever necessary.



Next we'll make the turret, which is made from a cylinder. As usual, rescale and move as necessary until you get something like.



The turret is almost done :) Now just add one more cylinder (a thin, long one) then rotate (use the rotate tool) it until it's horizontal. Move it onto the turret so it forms the panzer's cannon. You should have something like

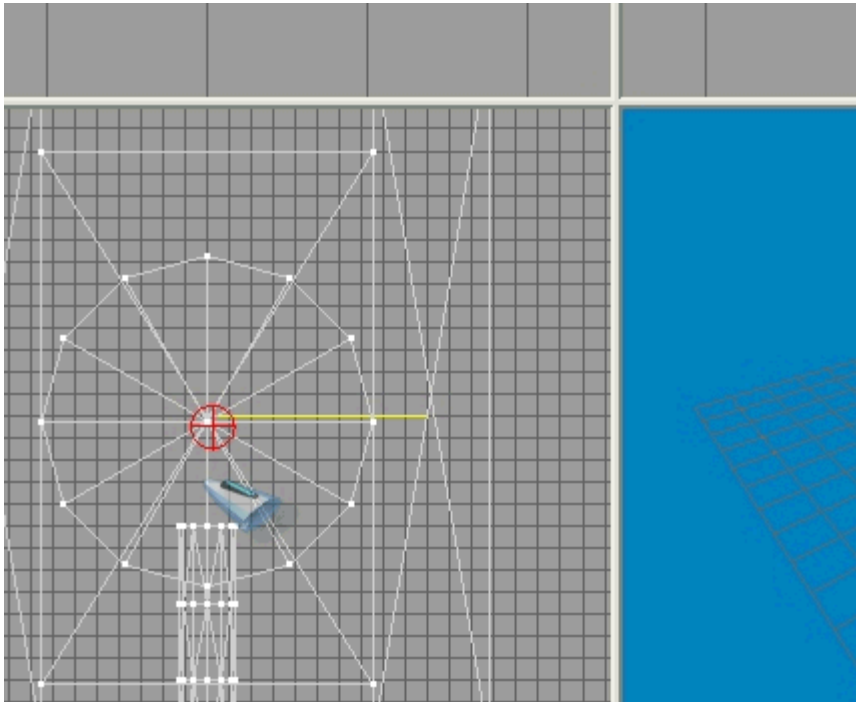


Now our panzer is done! Sure it looks like a hybrid of the Ausf and Tiger, but it'll serve well as an example. Lets save the model under the name "Tigor.ms3d".

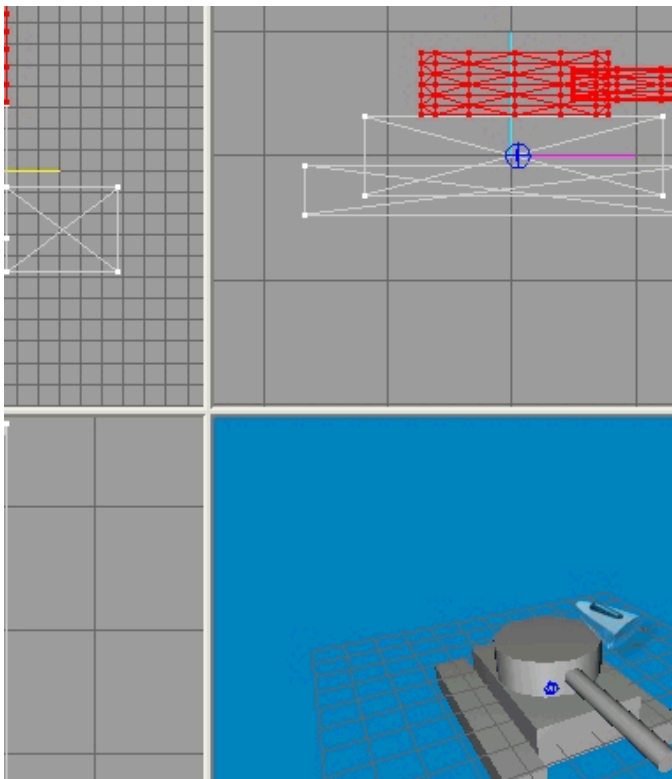
2.2 Animating the Panzer for A-STAND (Standing guard)

We see Paradox's panzers rotate their turret when standing still (this is the A-STAND) animation, so we want them too!

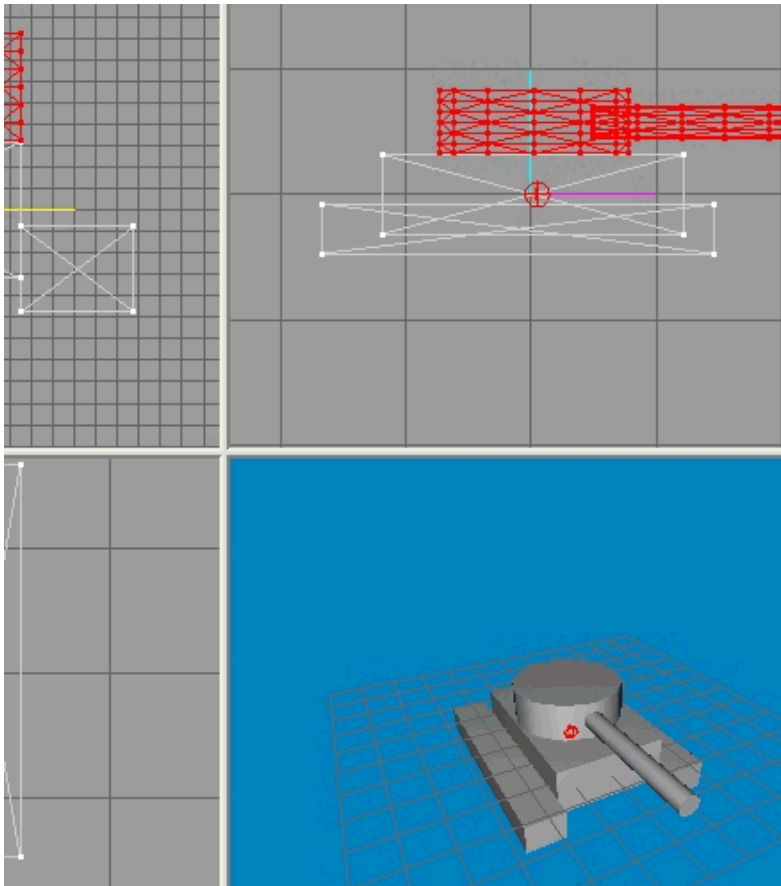
Now in the model tab select joint. create a joint in the center of the tank turret like this



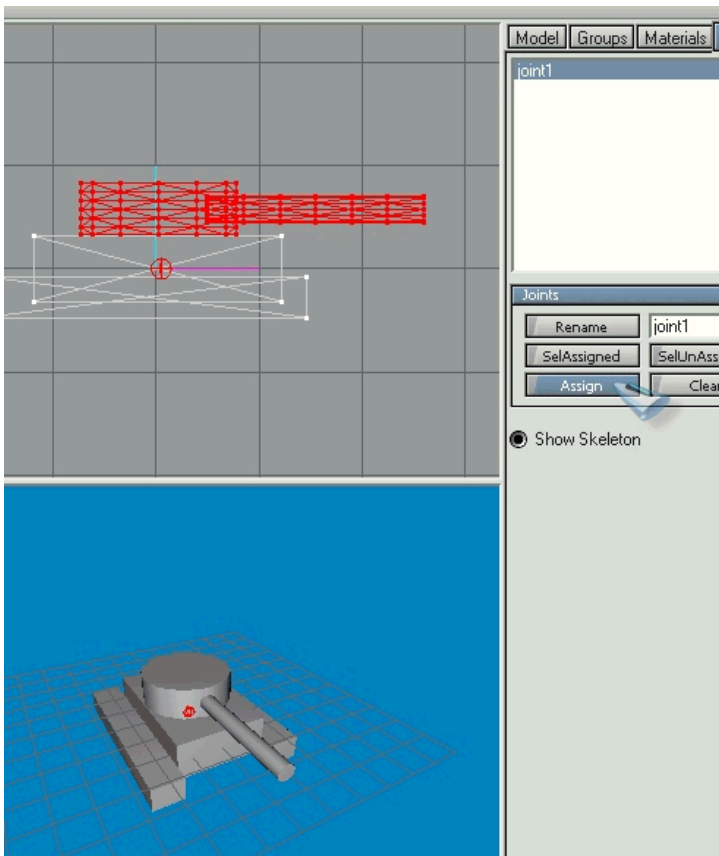
This joints are essential to do the animation. Now use the select tool and select the turret portion (using the group option during selection) of the tank.



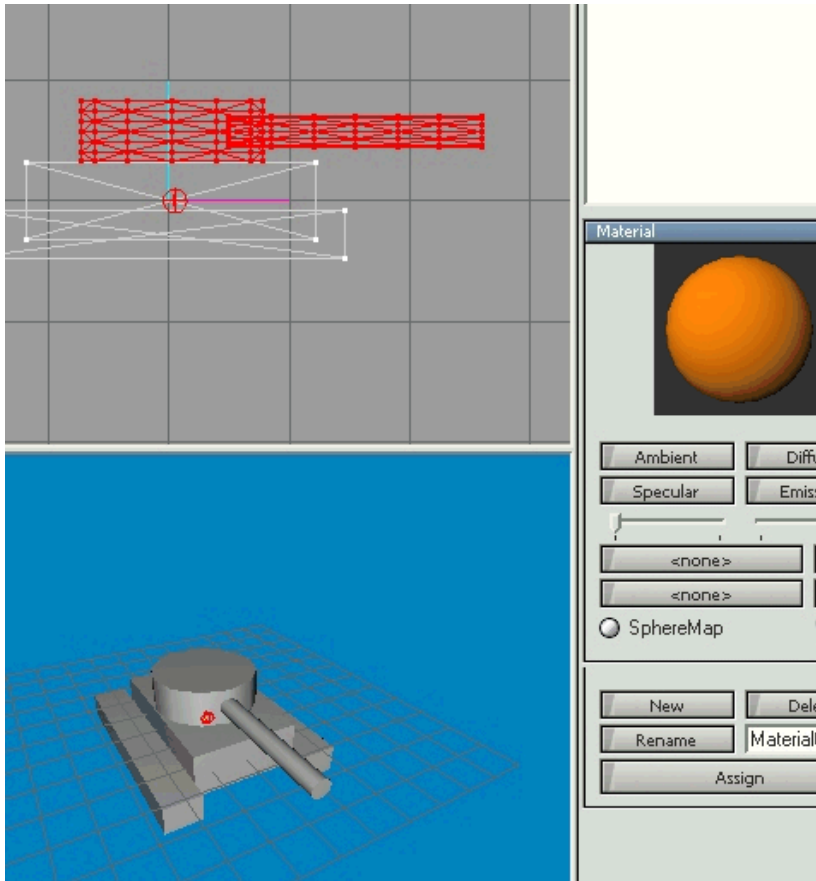
then **change the select option** to include joint and select the joint we've made



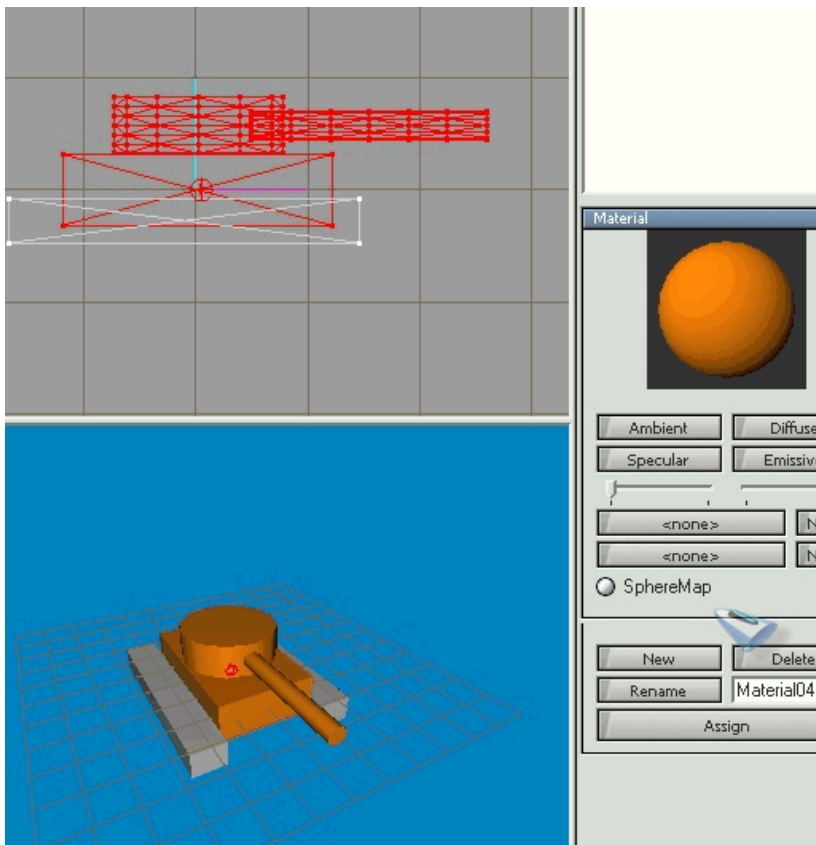
Now that we have all joints and the turret selected, we'd want to assign them together so they move during animation. Select the Joints tab (beside Materials) and press Assign.



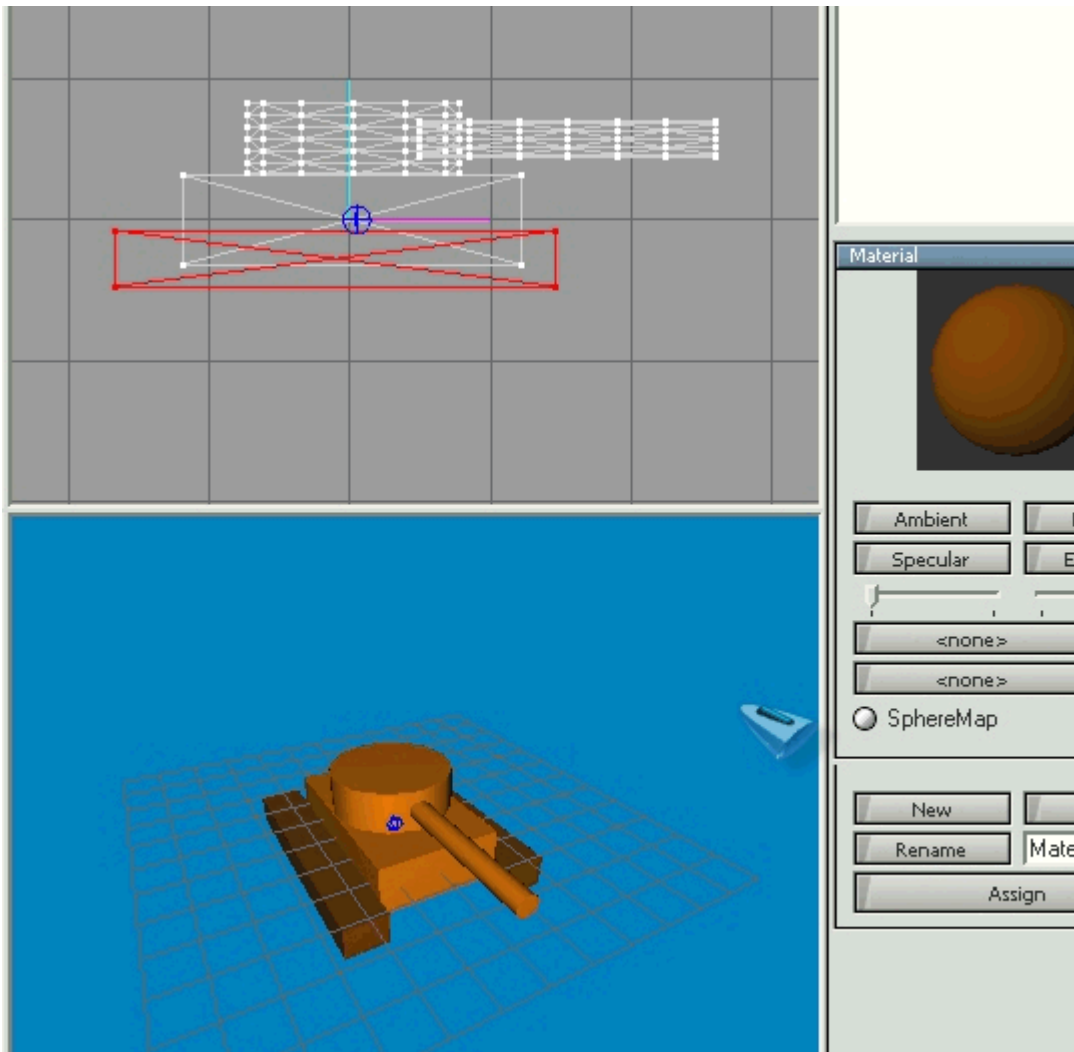
Oops, we nearly to give our Tigor hybrid color. So press the material tab now. Press New on the material tab. Click on Diffuse and select an orange-ish color.



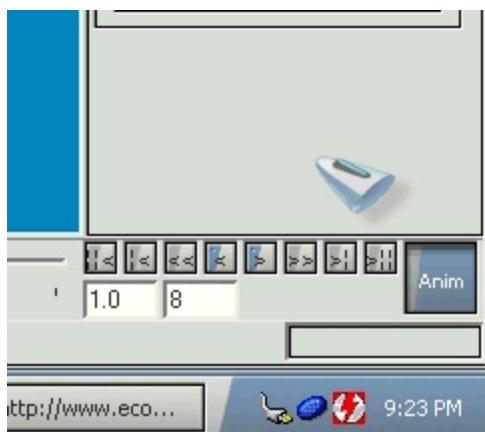
Now go to the models tab and click Select (with groups option enabled) the Main body and turret portion of the tank (not the tracks) and select the material tab again and click Assign to apply the colors.



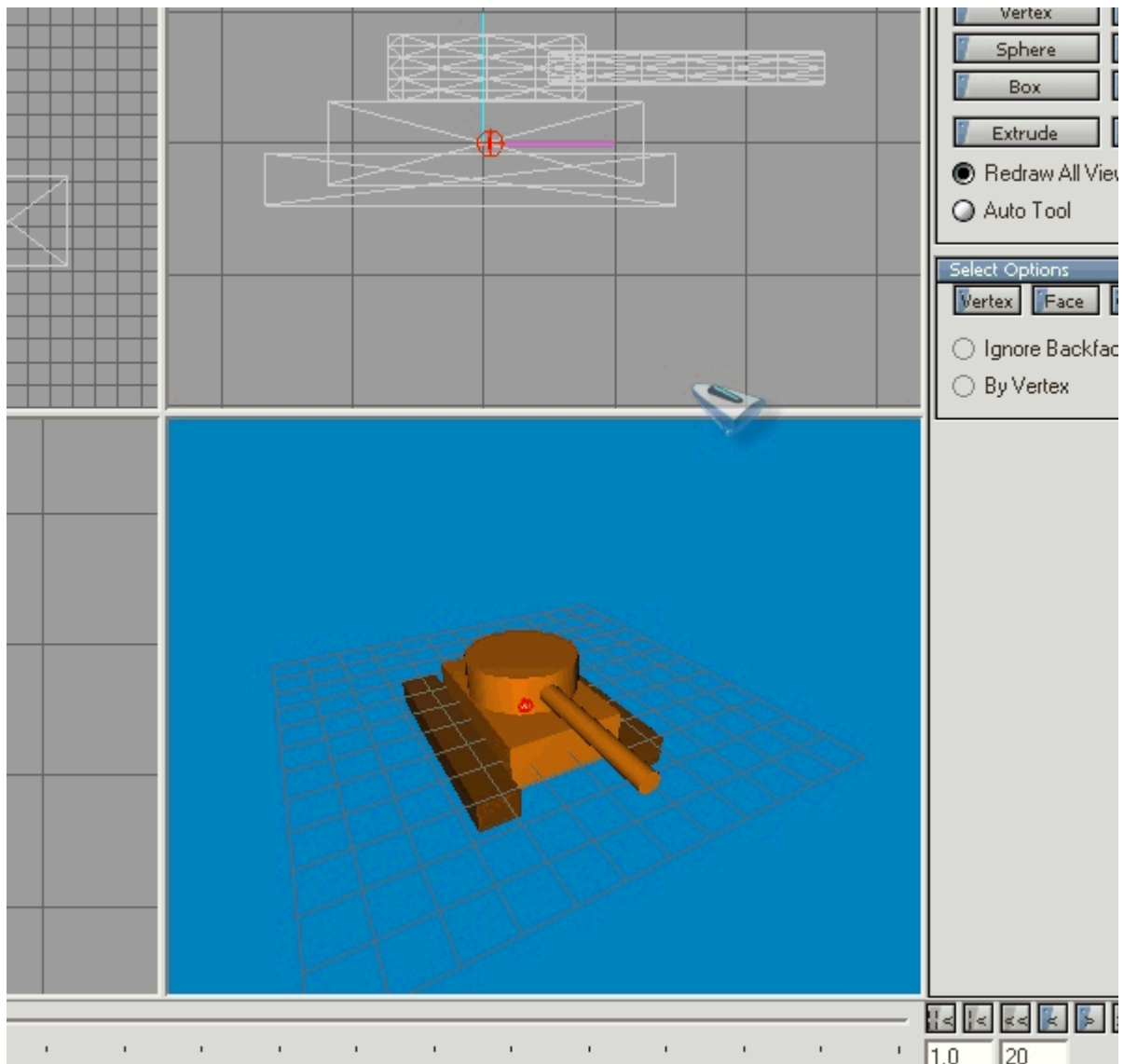
Repeat the above to create another material, this time with a darker brown and apply them to the tracks to get



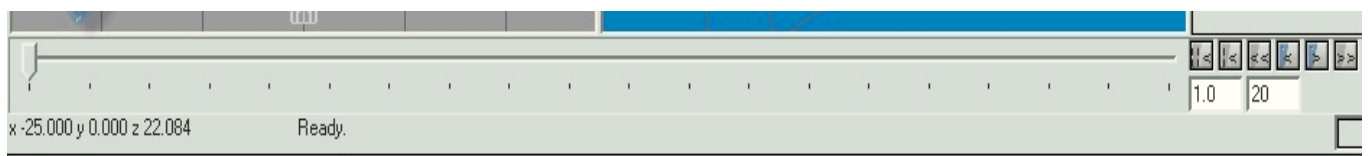
Now on to the animating! Click on the Joints tab again and choose the first Now Look down for an Anim button and press it. We are now in animation mode.



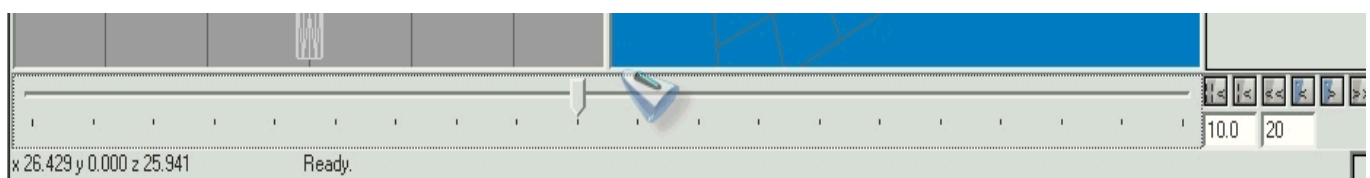
Change the total frames (here is 8) to 20. (Make sure we're in animation mode) Goto to the models tab and Select with joint option on our joint.



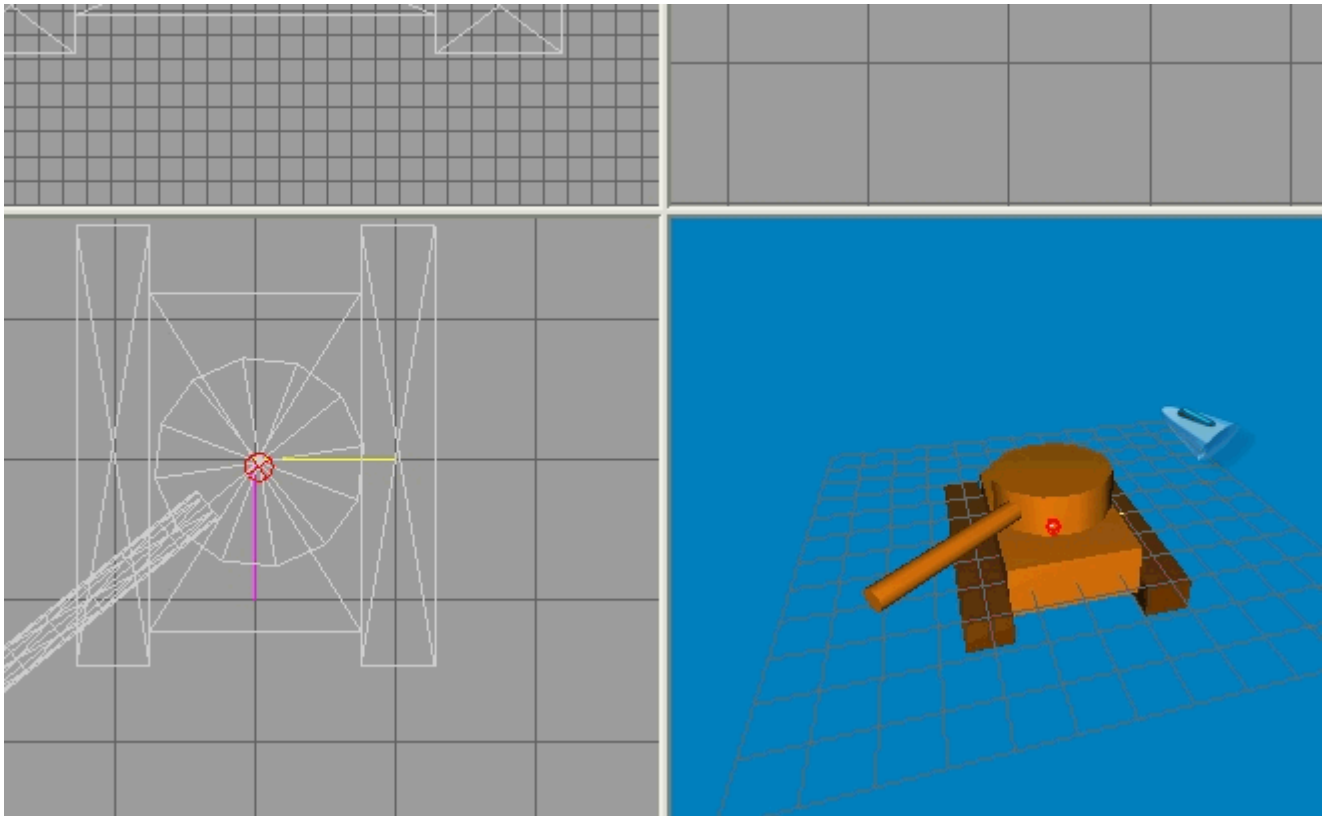
We'd want to make this a keyframe. A keyframe is a state in the animation we want to reach. This means that we want to start with our turret facing forward. Pay close attention to the huge slider below. Now we're working on frame one.



Press Ctrl+K (this makes the current state a key frame). Now move on to about the middle (tenth frame):

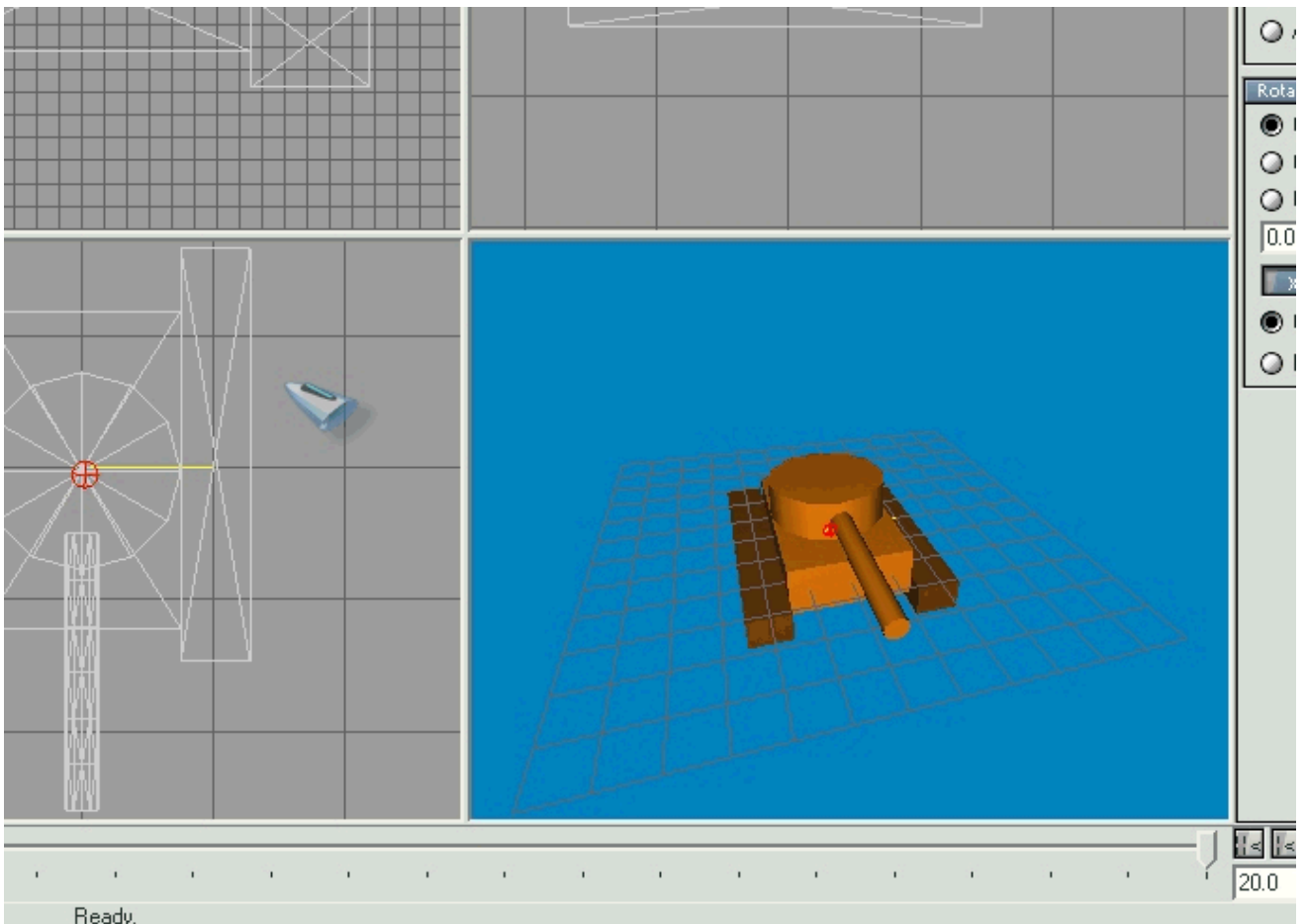


So on the tenth frame, we'd want our model's turret to be facing abit to the right (from the tank's perspective), so we rotate the joint using the Rotate tool in the model tab to make so:



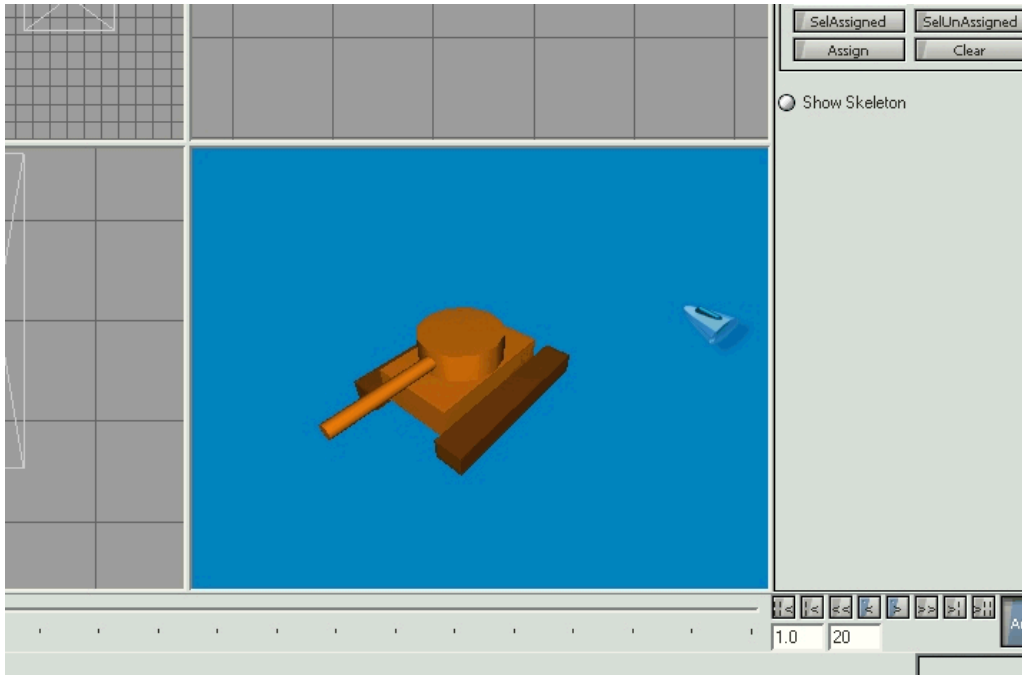
Don't worry if you consider this a big jump from our previous position. Milkshape will make the appropriate transition. Press Ctrl+K again to make this a key frame (**in the tenth frame of animation**).

Move towards the end (20th frame) and rotate it back to it's original position, then press Ctrl+K again.

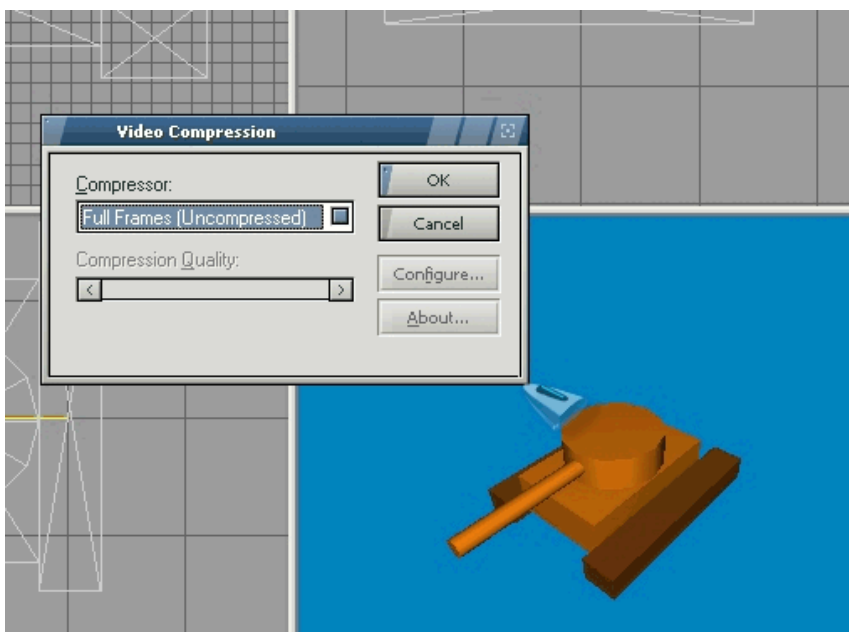


Now to see our simple (if crude) animation **press the 3D perspective window Once (to activate that window) and then the Play forward button** (look for it near the Anim button). IF NOT THEN REVISE THE TUTORIAL WHERE MIGHT YOU HAVE DONE WRONG. DONT WORRY. If you've done everything correctly you can now see your turret rotating a'la Paradox's tanks. Now we're almost done animating.
Now right click on the 3D perspective window and turn off Show Grid and Axis. Also, select the joints tab and deactivate show skeleton.

Then, Angle your model in the perspective window so it would appear right in the game. YOU should have something like



Excellent. Now the final step would be to right click on the perspective window (DONT CHANGE THE ANGLE) and select record AVI. Name it "TigorStand.avi". Select Full Frames (uncompressed) in the option presented and click OK.

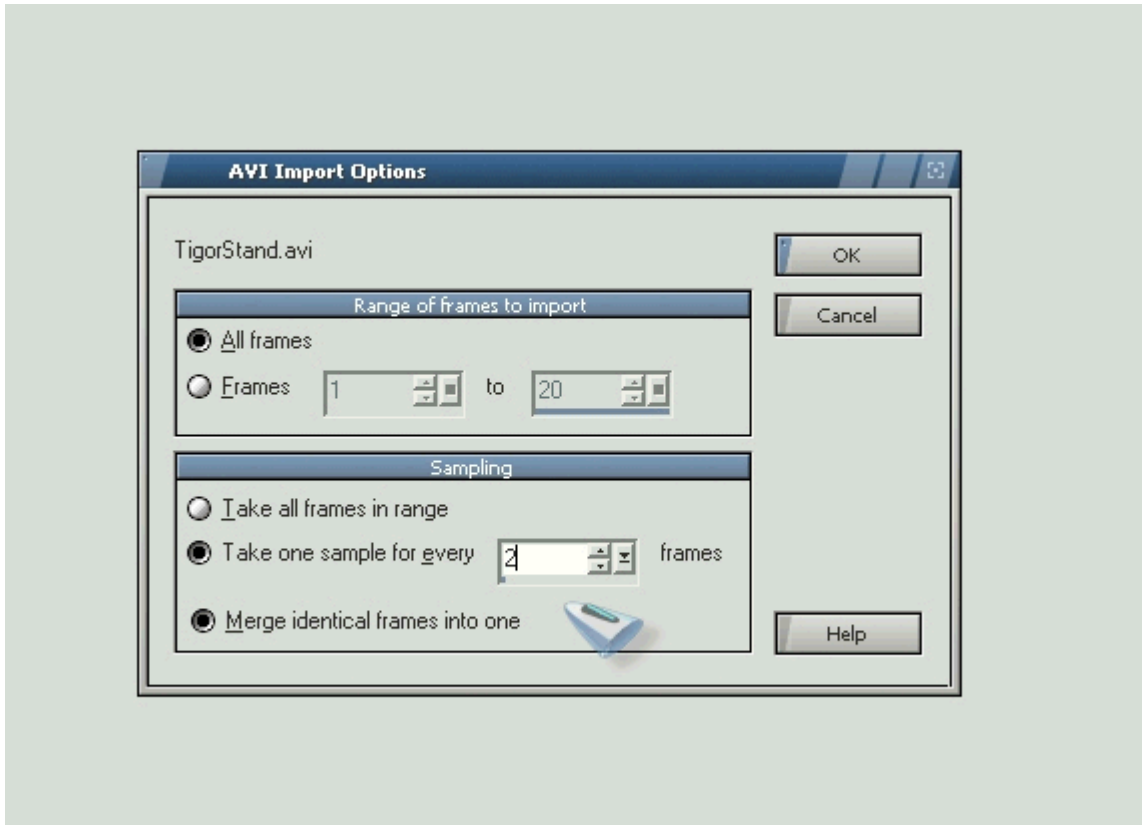


Congratulations! You've finished the animation.

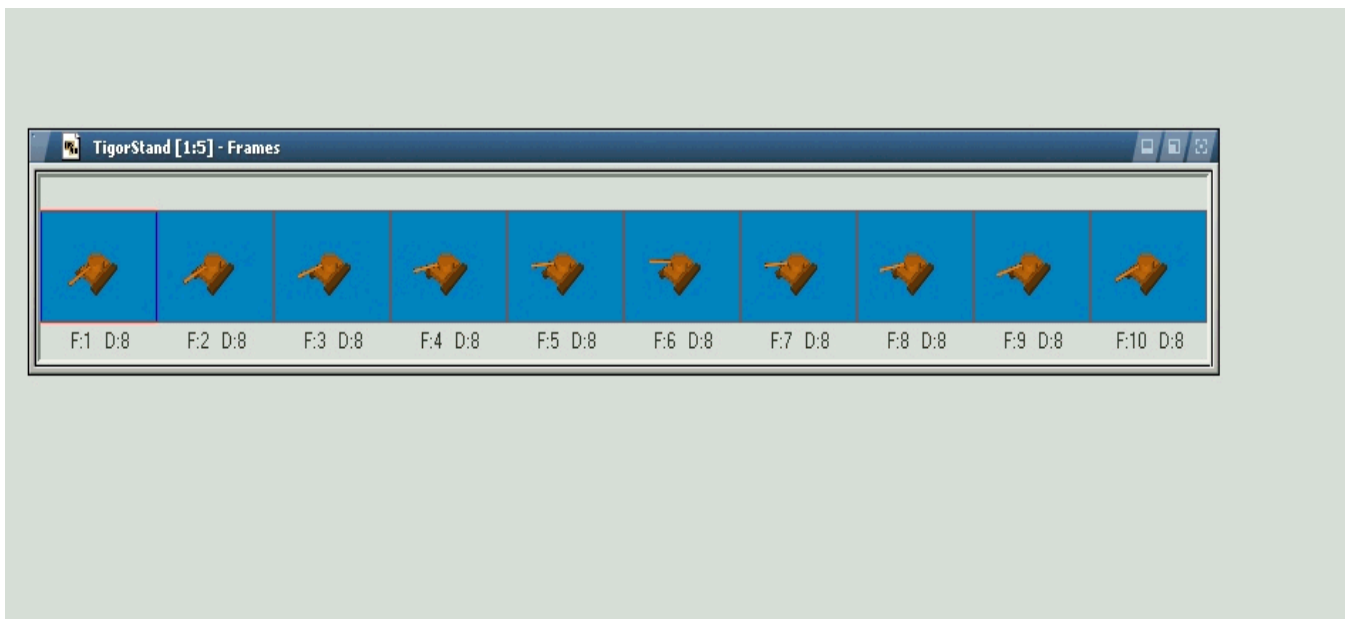
3. Putting the Sprite together

3.1 Frame editing with Animation Shop

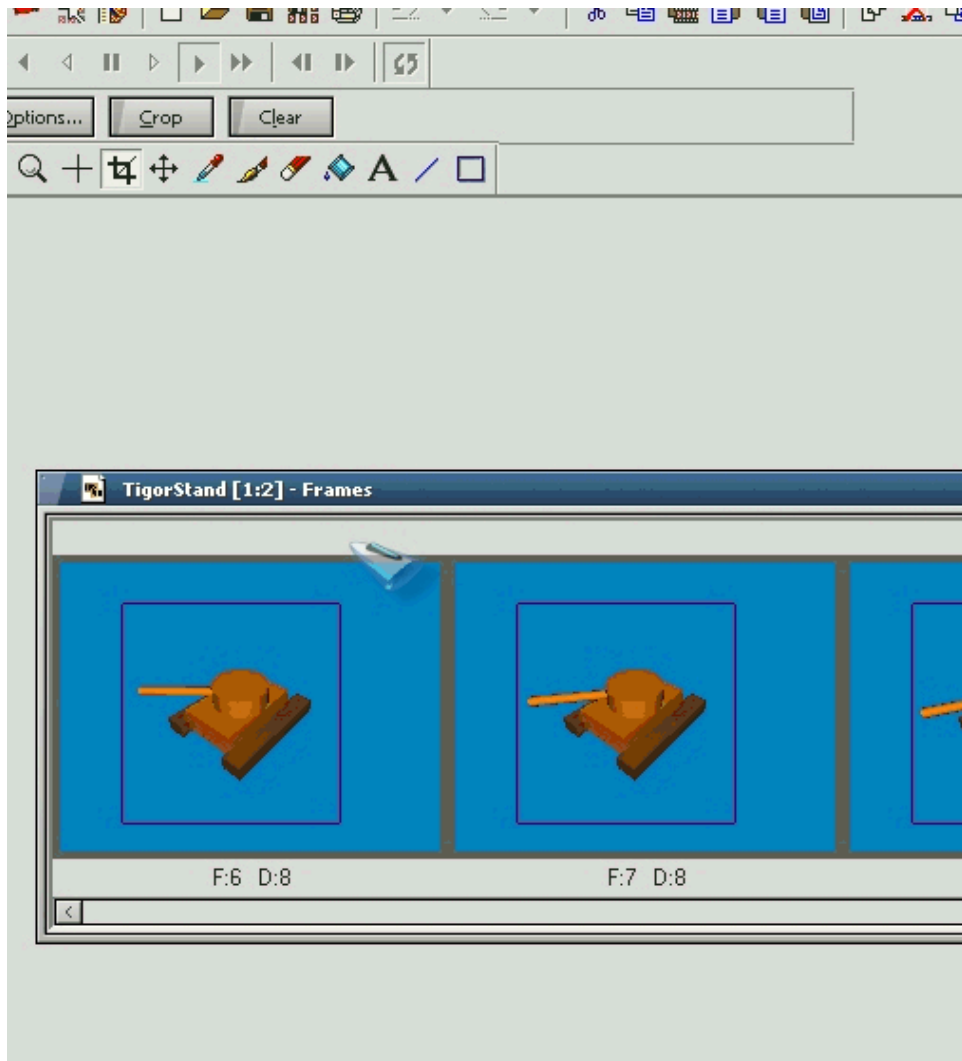
Open up Animation Shop. Open (File then Open) our TigorStand.avi and on the following window select 1 sample every two frame (this will cut the original 20 frames into just 10, thus causing a bit of choppiness).



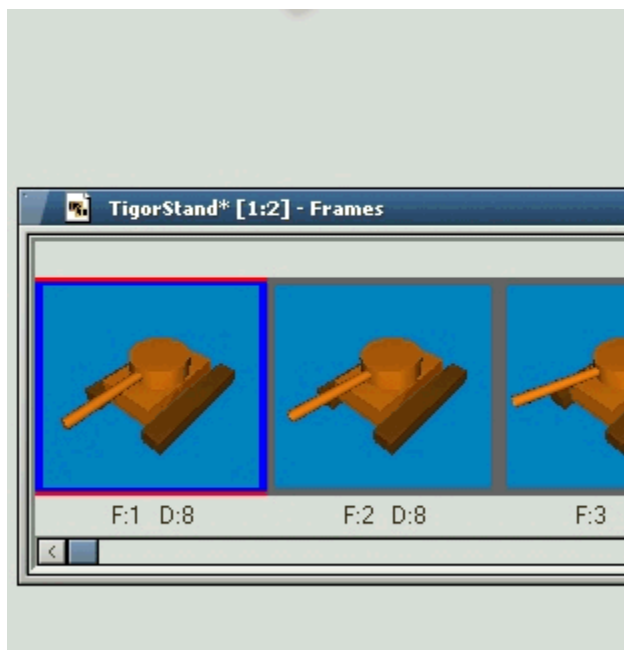
However, this will only serve as a sample, and **to get a smoother animation you should have more frames!** Now you'll have a 10 frame animation like (this is zoomed out). You should get something like:



Right now the animation frame is too big, leaving much space. Select the Crop tool from the toolbar and select a smaller portion of the animation:



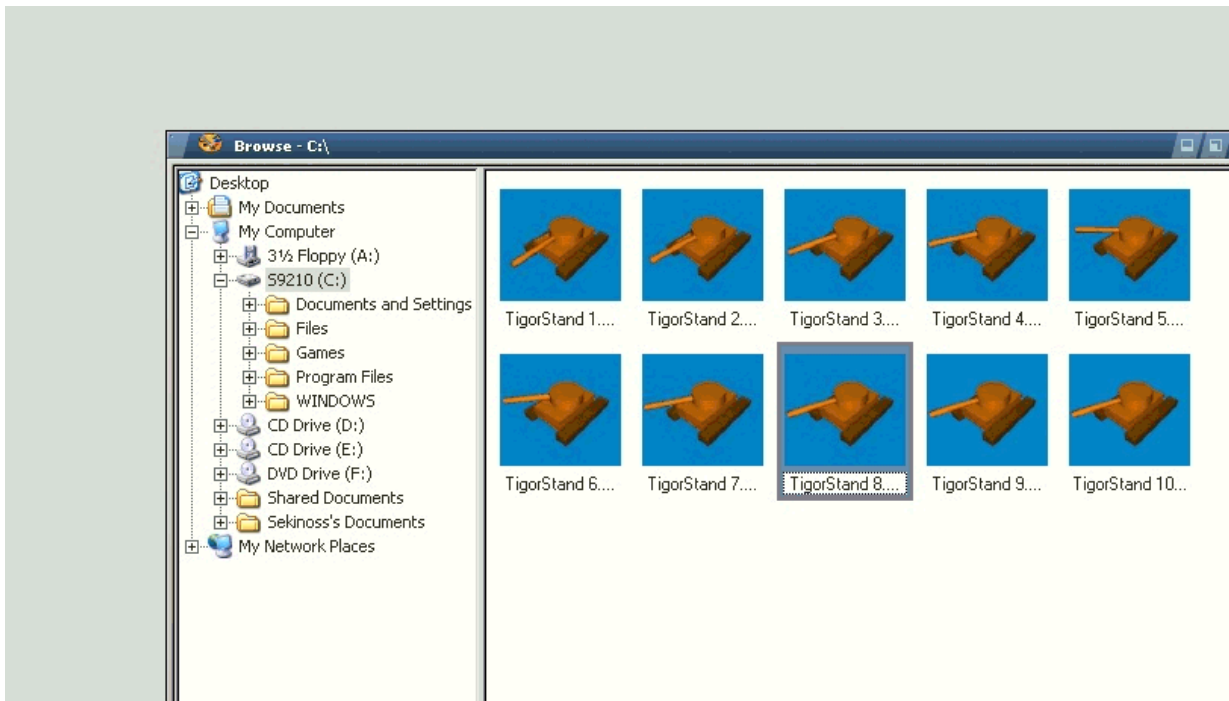
Then Crop it with the crop button to get:



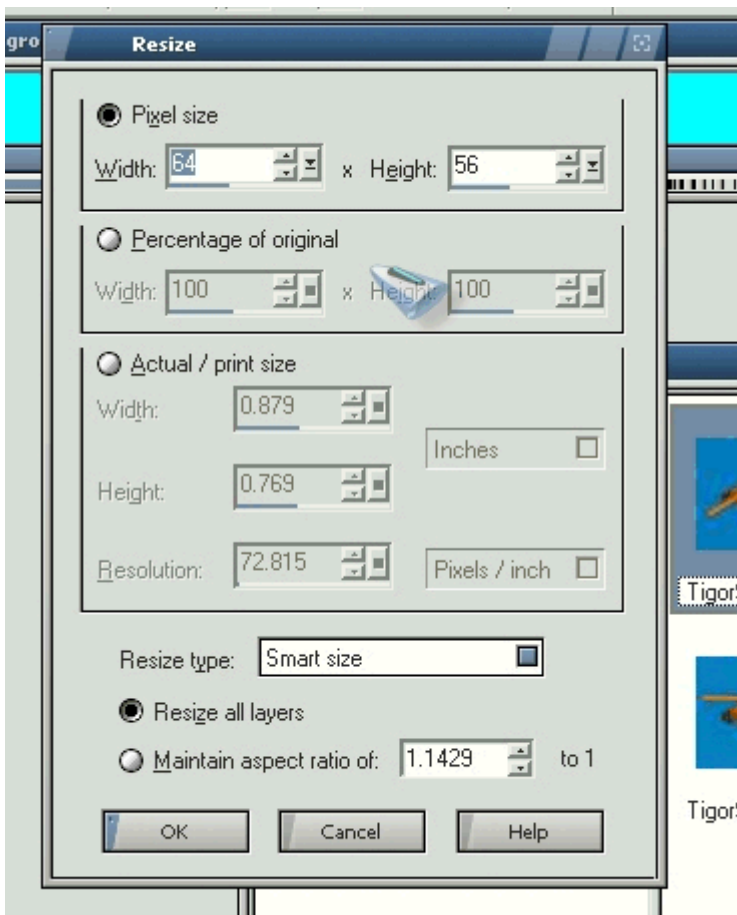
Excellent! Now choose Select All from the Edit menu above, then **Save Frames As** from the files menu. Give it a name TigorStand, and it will write a series of images to be used as frames. You're done with Animation Shop!

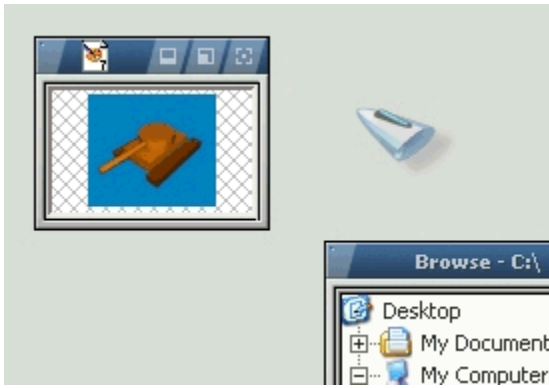
3.2 Combining the frames (with Paint Shop Pro)

Now open up Paint Shop Pro. From File menu choose Browse. Select the directory where you store the TigorStand Frames, and you should get

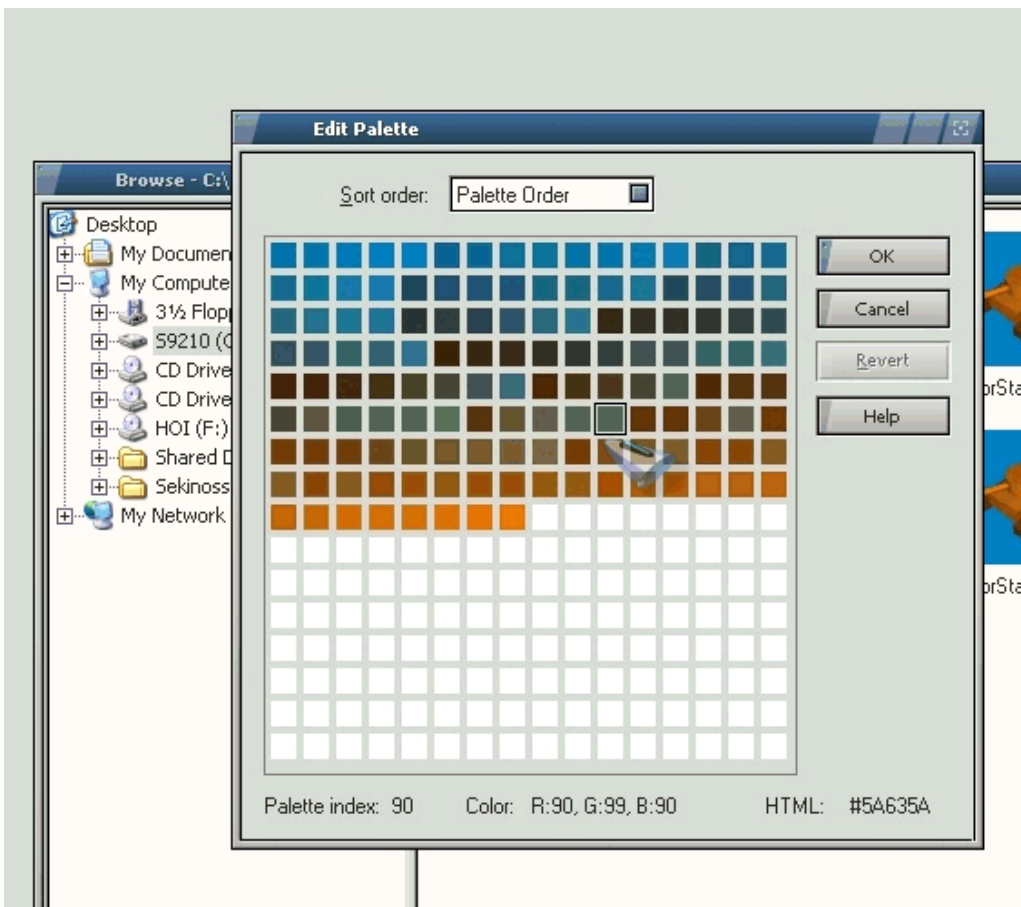


Open the first file by double clicking. This is still too large, so we should resize. Press Shift+S to Resize and set the pixel size to 64 by 56 (64x56) with **Smart resize** option below, to conform with the standard size of Paradox's panzers.

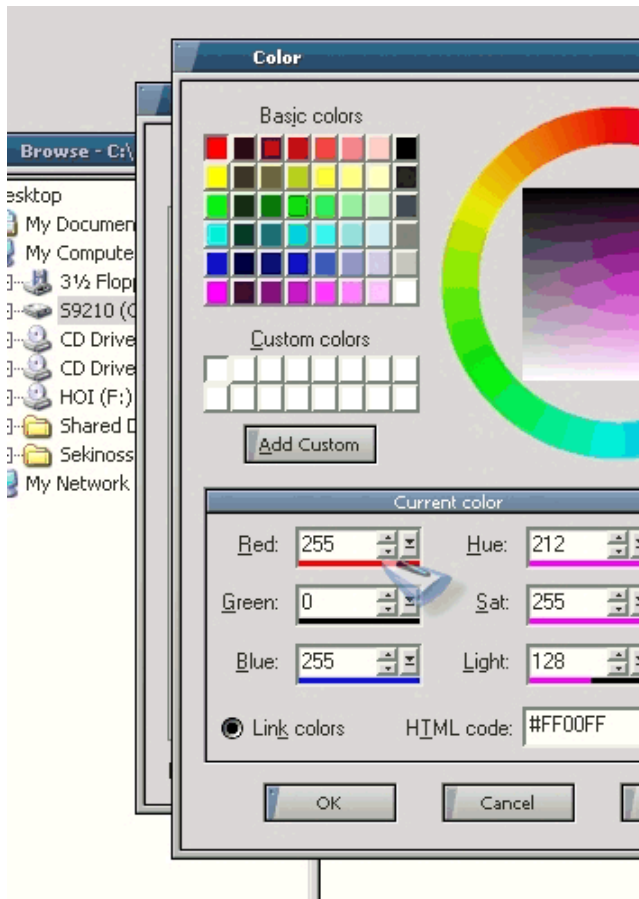




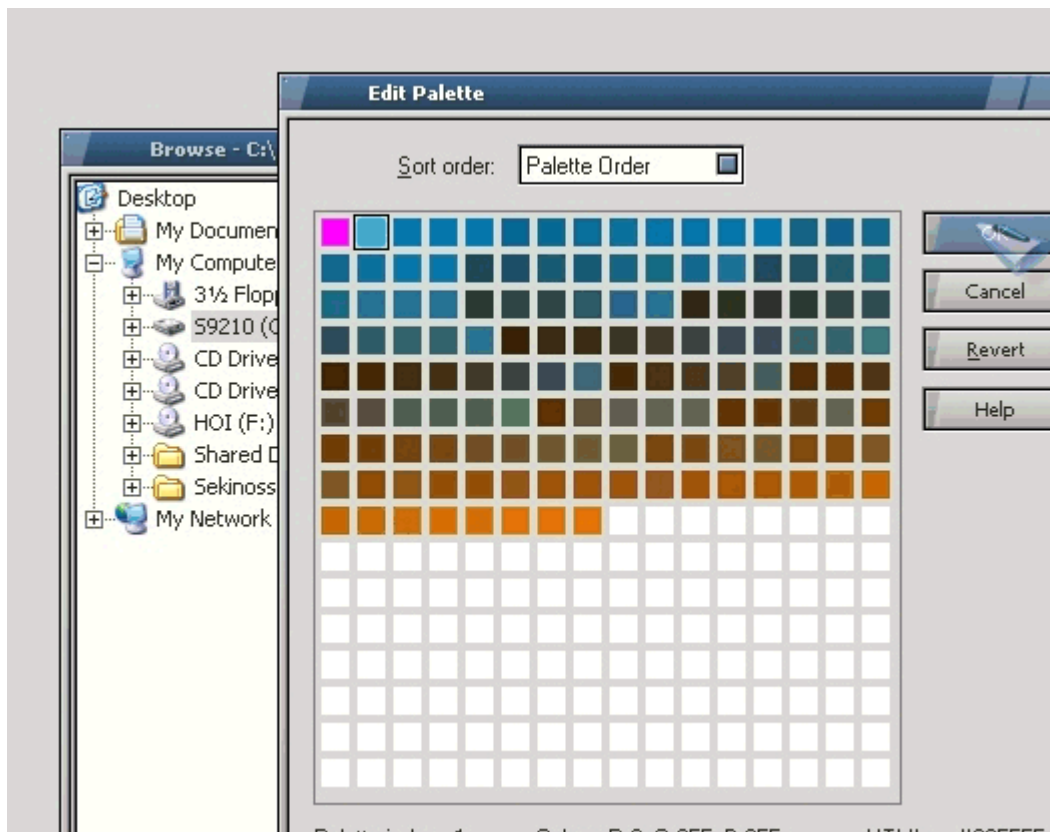
Now it's in the right size, but not the right palette. It should be in 256 colors, so we decrease color depth by selecting the Color menu then decrease color depth to 256 colors. Just press OK on the following window. **Now save the TigerStand 1.bmp via the File then Save option.** We have to adjust the palette to match Hol's required format. Now select from the Colors menu the Edit Palette option. You should have:



Select the leftmost and upper box (the corner) and double click. You should have a new window. Set the Red Green Blue entry as 255, 0, 255 respectively. Now you should have:



Great! Now press Ok and select the color immediately to the right of the now Pinkish color. Repeat the above with R G B 0,255,255. You should have the end result:

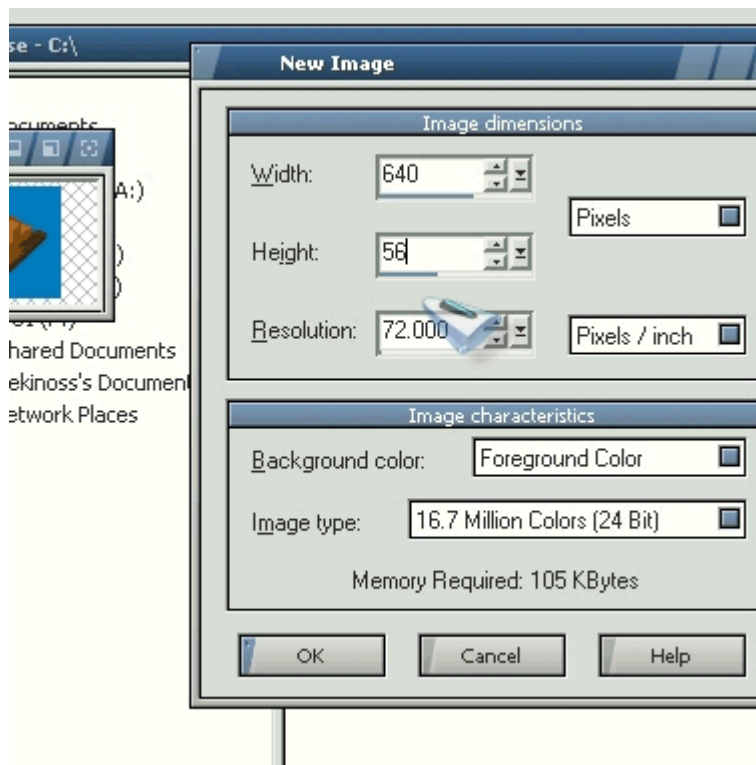


Click OK. You might see some glitch in the coloring of your model. This is normal so ignore it. Then choose Colors again then Save Palette. Save it under *Tigor.pal*. **But do not save the image itself!**

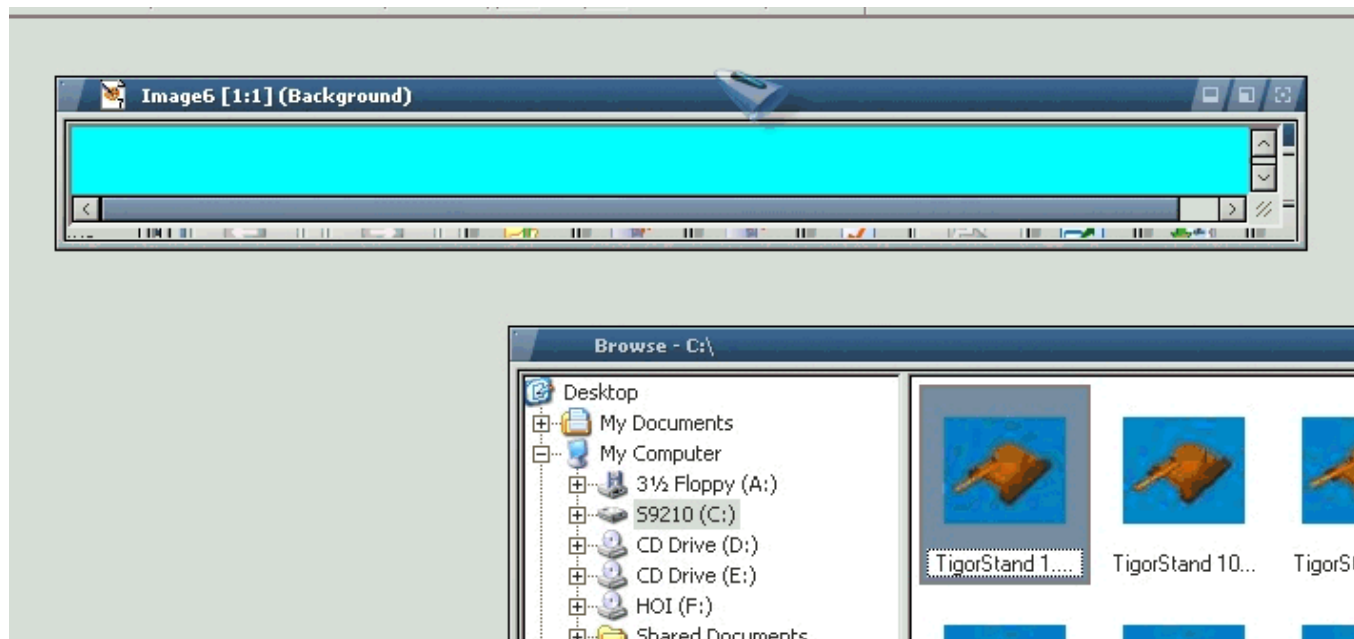
This Palette is important as this will be used for the remainder of the tutorial as a reference palette for the game. This already has transparency (pink) and shadow (neon) applied into it. Now close the image without saving!

Next, load up the second frame and resize the image to the same size (64x56 this case) and save the image. **Do the same for the rest 8 (yes this can be daunting without batch conversion, which is a bit complicated) until all of them are of the same size and are saved.**

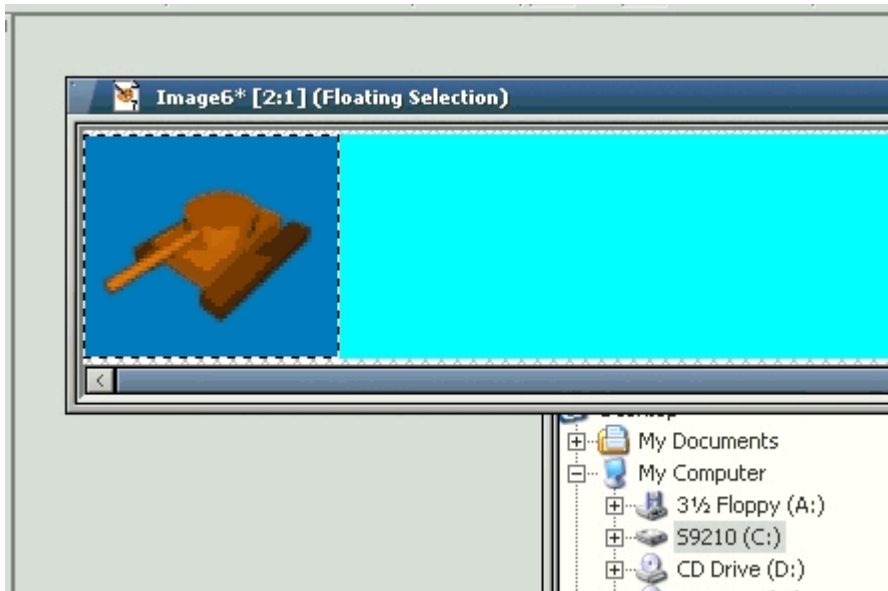
Now create a new Image by selecting File then New. Give 640 by 56 as it's dimension (as we're squeezing 10 frames of 64x56 sideways here) and 16 million colors:



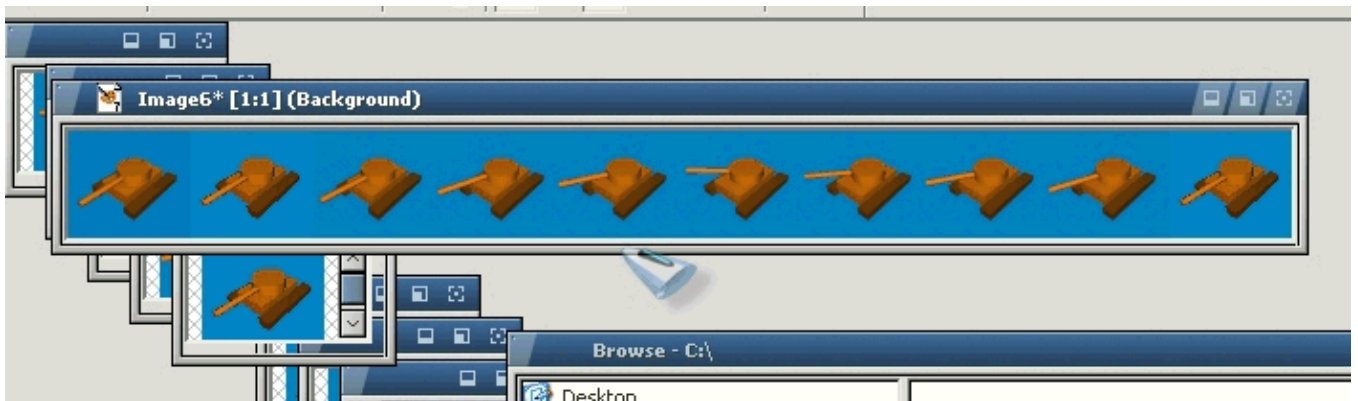
You should then have something like:



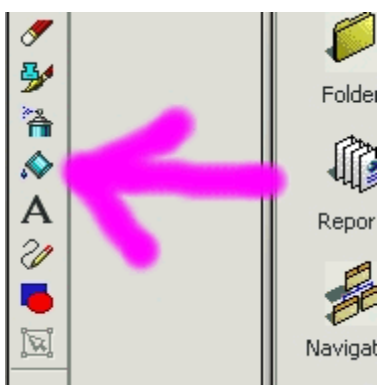
Great. Now open up the first frame and press Ctrl+C to Copy. Click on the newly created 640x56 image and press Ctrl+E to paste. Position it Exactly on the left of the image. **PRECISION IS IMPORTANT HERE as a miss of a single pixel can throw the animation OFF BALANCE!** You should position like this:



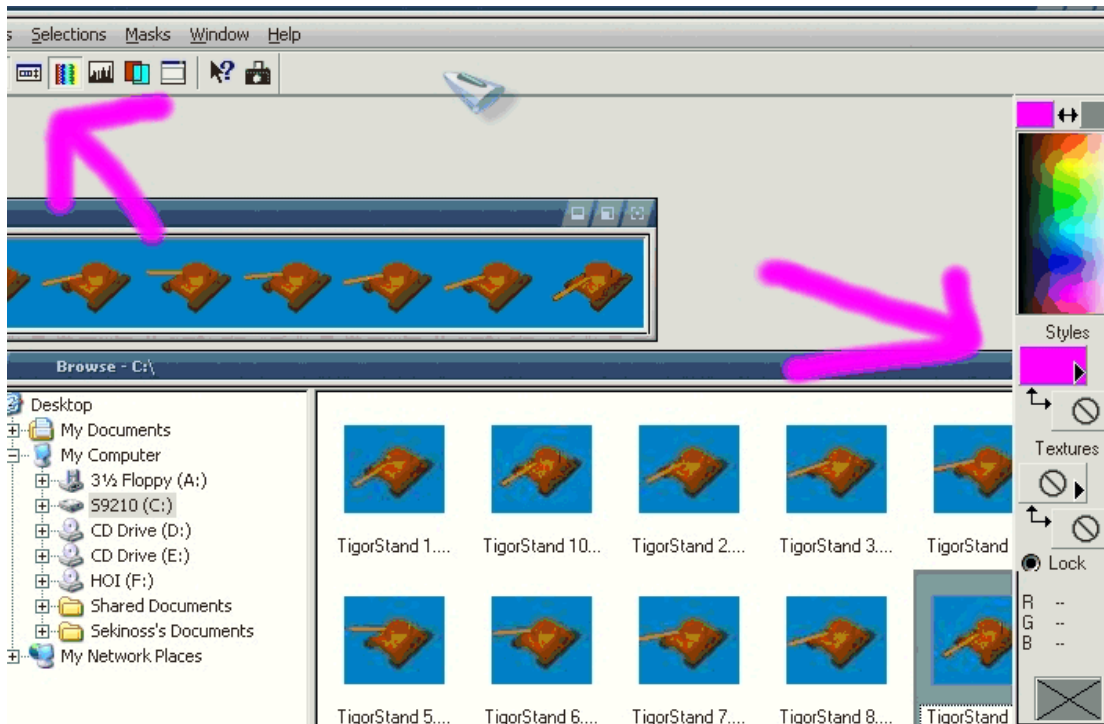
Now open up the second image and repeat, positioning it exactly beside the first. Again, **PRECISION is PARAMOUNT**. Repeat for the rest of the image (in order) and you'll fill exactly all the space that's empty and get something like this:



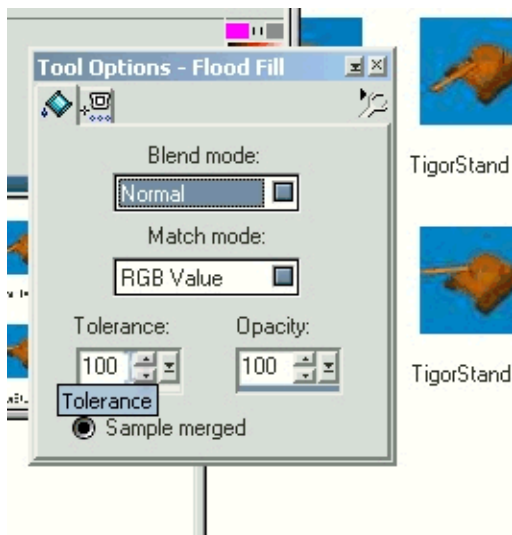
Splendid. We're nearly done with the A-STAND animation. Select the Fill tool from the toolbar on the left (the space fill feature).



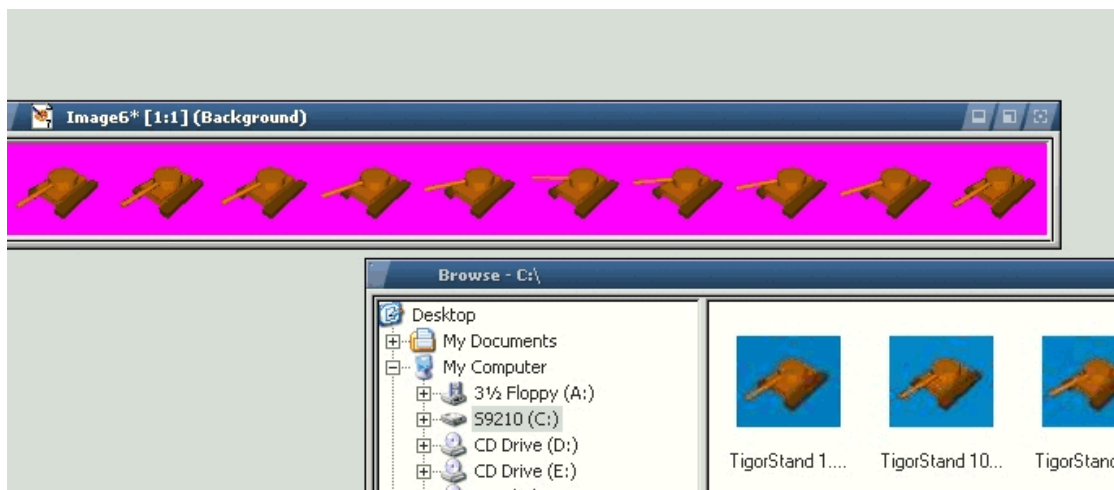
Now from the color bar on the right select a color 255,0,255. Do this by clicking on the color selected (under the "Styles") on the right. Next, Press the activate toggle window to activate a Tool Options window.



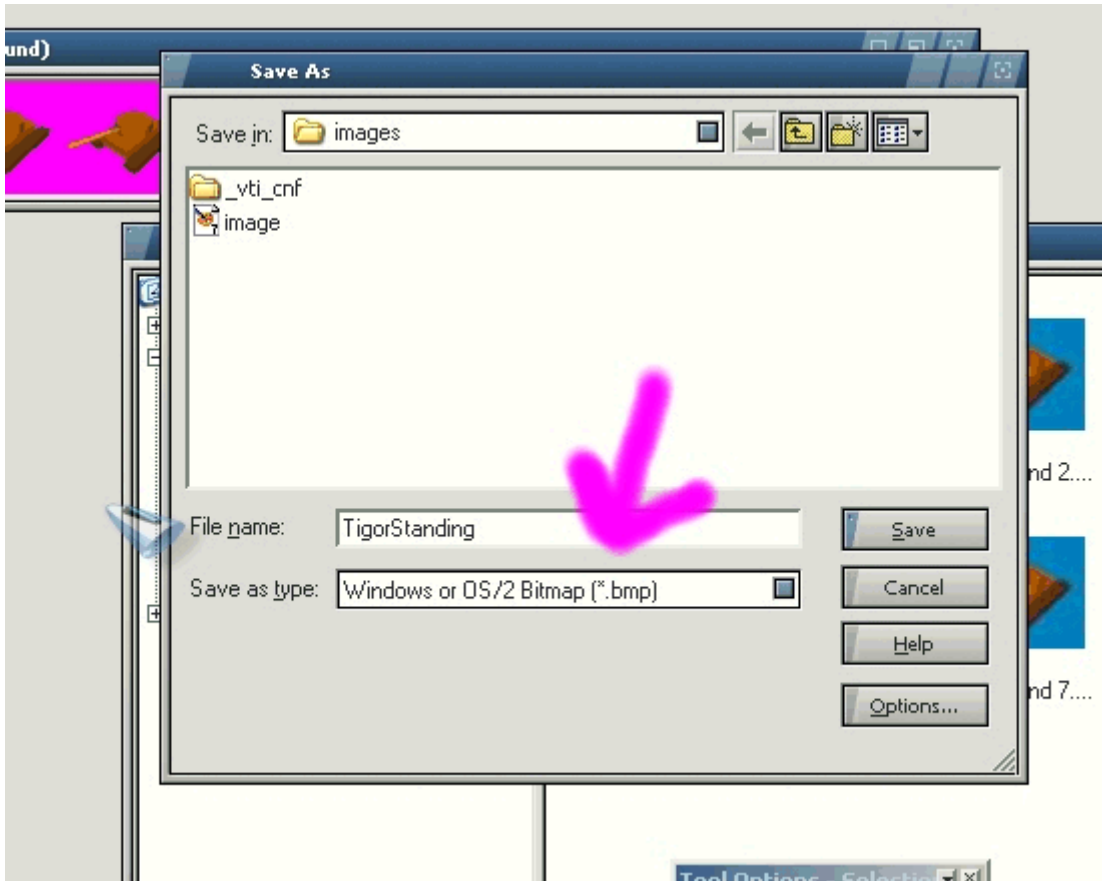
In the Tool options window make sure the Tolerance level is set to 100



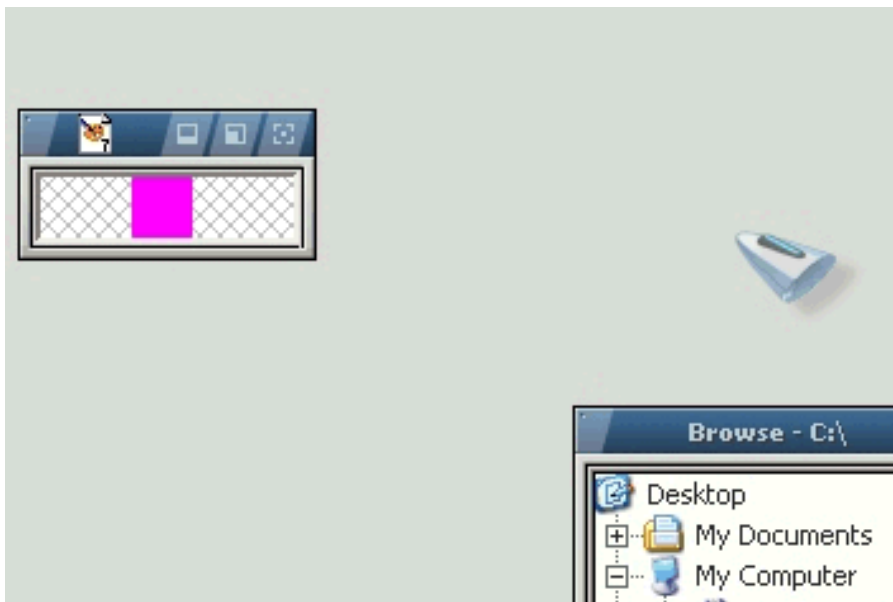
Next, just fill the space in between the tanks with pink. So you'll get something like



Now select Colors then Load Palette and choose Tigor.pal we created before. Next Save the image as a BMP file *TigorStanding.bmp*. Make sure that the format selection below is **SET TO Windows BMP**.



We're almost done. The final bitmap to be created is the palette itself. Now like before create a new image with dimensions 4 by 4. Color it pink (255,0,255) like we did it before. Now you should have



Next, load up the palette *Tigor.pal* like before. Then Save the Image as *TigorPal.bmp*, **AGAIN MAKE SURE THAT IT IS SAVED IN Windows BMP!**

We're now done with Paint Shop Pro!

4. Implementing your sprite in Hol

4.1 Make your SPR files!

Now open up your Notepad. Copy down the format below (which has already been explained above). This is to replace the German Level 1 Panzer graphic with ours!

```
Sprite = {  
  Bitmap = "TigorStanding.bmp"  
  Origin = { x = 24 y = 35 }  
  Frames = 10  
  Speed = 5  
  Palette = "TigorPal.bmp"  
}
```

Now save the file as "*T-PANZER A-STAND C-GER L-1.spr*". Make sure to **INCLUDE THE .spr extension when saving!**

Now we should have all the ingredients ready for copying to the Hol directory. **Note: This might screw up your original graphics for Hol, but you can reinstall to recover.** The materials to copy:

TigorPal.bmp to GFX\Palette\

TigorStanding.bmp to GFX\map\units\bmp

T-PANZER A-STAND C-GER L-1.spr to GFX\map\units

NOW WE'RE SET TO GO and TEST.

4.2 The Game

After copying the three files (remember here we're just replacing the A-STAND standing animation). For a complete sprite you need 10 more graphics and 10 other SPR files, **but the concept is EXACTLY the SAME!**

Load up Hol, and choose the 1939 and select Germany. Hold your breath.... Now look for an armor division in your army. It's somewhere near the Polish border. Select a create new unit if it's not on top and....



You've got yourself the Tigor you made on the game! And it's animated as well! But the animation is crude, the model simply blocky, but it served its purpose. Sure it might not bring victory to the Wehrmacht, but it can teach you a great lot about sprite making in Hol. Congratulations!

4.3 The Rest of animation

If you try to move your units you might find it revert into the German LVL 1 panzer. That's because we have not made an animation for that ... yet. There are still 10 other animations to do, along with 10 SPR files to make to complete the sprite. But fear not: the frames won't be as many as the standing animation. My advice:

- use 4 frames for A-WALK

- use 20 frames for A-STAND

- use 15 frames for A-FIRE

To understand more about naming and creating the other SPR files, refer to my earlier section on file structures. Well Done!

5. Additional Infos and Tips

5.1 Troubleshooting

Sprite making is no doubt a simple task at first. It's a "Stony Road" :) from start to finish and there are bound to be problems for starters. Here are some common errors:

Q: What if the animation jiggles/shakes/distorts a little on SOME FRAME?

A: This suggests that you might make an error during the delicate Frame positioning on the final bitmap. If necessary redo the whole image positioning VERY CAREFULLY and the problem should be fixed.

Q: What if I get a cross instead of any graphics at all?

A: Then your SPR contents are wrong. They might point to a wrong, nonexistent sprite, thus no source for the graphics!

Q: What if there is severe SHIFTING of FRAMES in the animation?

A: Most likely you mispecified the number of frames in SPR with the actual on the BMP. Check it out.

Q: What if the colors look inverted/messy?

A: Most likely you've made a mistake on the paletting. Revise the palette making section. Or you could be using the wrong palette in the SPR file.

Q: What if the graphics is unchanged (ie. remains the old panzer or whatever)?

A: Make sure you name your SPR files correctly and place them in proper directory. It might not trigger to use your sprite instead of the normal ones.

5.3 Closing Words

Well, you've reached the end of my tutorial. I hope you now have a better understanding on Sprite making in HoI, which could also be applied for other games with sprite graphics.

Start out simple. Dont overmodel your 3D meshes as it is going to be resized with some details swept away. Also, take a look at some of my work or others or the default Paradox BMPs to get more understanding. To contact me send me an email at sekinoss@yahoo.com, or just visit the Graphical Editing forum! Good luck on modding the graphics of Hearts of Iron!

- Sekinoss-

Tutorial II

Generate the 8 bmp files for each sprite Run, Fire and one for Stand, 17 files in total.

Open up the first Fire bmp image.

Colour of shadow, colour of background are very different. Note the colour settings in gimp.

Background (bright magenta) will be 300, 100, 93, 238, 0 238.

Dark magenta (shadow) will be 300, 100, 58, 149 0, 149. or something close to that.

Make sure the shadow colour is selected in the toolbox, click the Select by Colour Tool, and select all the shadows in the sprite.

You are making all the shadows the shadow colour.

Unselect.

Choose the background colour in toolbox.

Use the Select by Colour Tool and to remove all those extra pink spots around the sprite that show up as flashing pink spots around the sprite in the game. Set all the spots to the background colour to remove them.

When done:

You need to create your palette for this sprite.

Go Image, Mode, RGB.

Go image, Mode, Indexed

A gui pops up. Select Generate Optimum Palette, 255 colours, Untick remove unused colours from colourmap.. Click Convert

Ensure the palette menu is open.. if not go, Windows, Dockable dialogs, open up the palette.

Palette menu, Name the palette, Select the image, Name the new palette to suit the sprite.

Import

The palette is now in a list. Double click it to open it. Enlarge it.

Use the dropper tool in the GIMP tools menu to select the background colour.. click on the sprite to select it... See what colour is highlighted, move that colour tile to the top left corner.

Repeat for the shadow colour, move to the top left corner, but one tile to the right of the previous (background) colour.

Your top left corner will now be:

Background colour : shadow colour.. and then the rest of the colours. Save.

You now have saved and named your palette.

.....

Now you process all the other sprite bmp files using this palette.

Go back to your original FIRE sprite that you used to create your palette.

Go, Image, Mode, RGB.
Go, Image, Mode, Indexed

The gui pops up again.

This time you choose Use Custom palette, click on the box of colours, select the palette you just made, leave all else unticked, and Convert.

You have now converted the image to your palette.

Save the file in the normal way to name a sprite.

With the file still open on the desktop:

Go, Image, Scale Image, make the file 4 x 4, (a dot).

Go, Image, Mode, RGB.
Go, Image, Mode, Indexed

The gui pops up again.

This time you choose Use Custom palette, click on the box of colours, select the palette you just made, leave all else unticked, and Convert.

Save the file as your palette file..like sprite_palette.bmp

Repeat for all the other images.

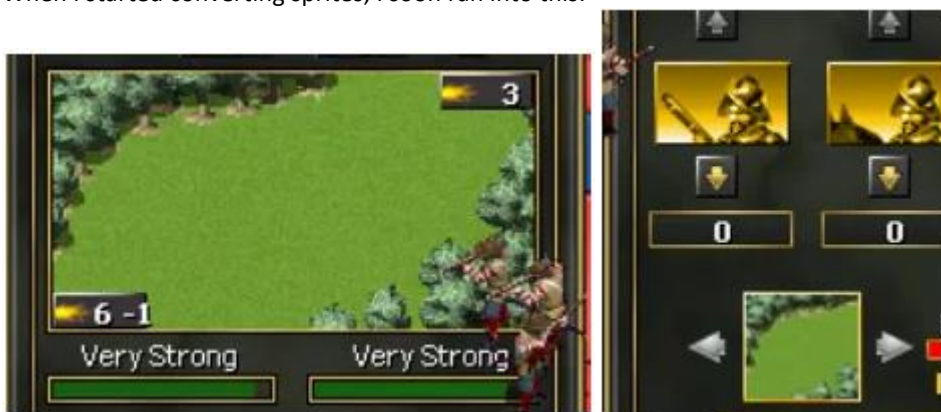
I mean: you've just processed one sprite and created your palette.

Use this palette to process all the other images. You have to do the background and the shadow on every image.

Problem

Now we're going to move on to deal with a problem that certainly isn't mentioned on the Darkest Hour tutorial - the positioning of the sprites in the combat and re-organisation screens.

When I started converting sprites, I soon ran into this:

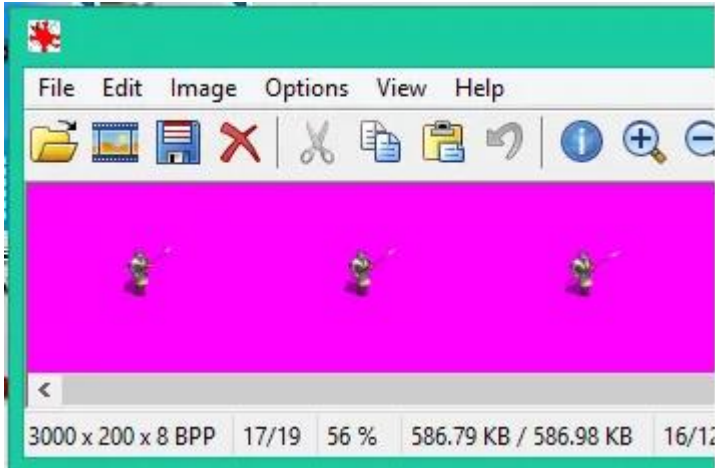


As you can see, in the combat screen the sprites are hiding in the bushes at the bottom right, while the sprite that should be in the re-organisation screen is half hidden in the top left of the screenshot. Those of you who used the first version of my sprites will be very familiar with this.

In order to adjust the sprites to fit the windows, you first need to download Irfanview , which is free software.

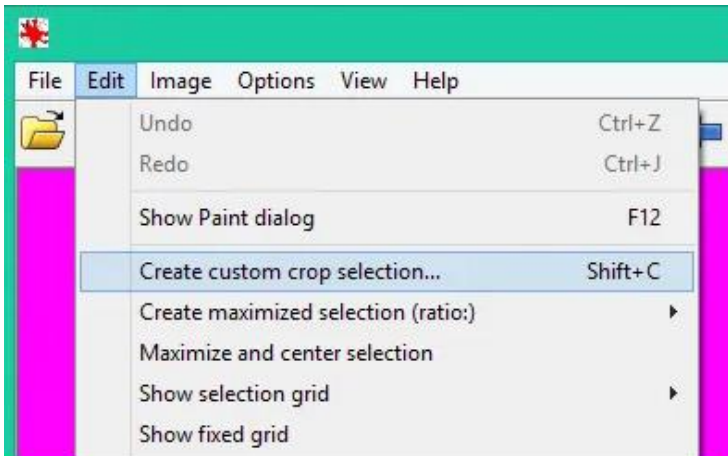
<https://www.irfanview.net>

Let's start with the FIRE NE sprite. Open it up in Irfanview.

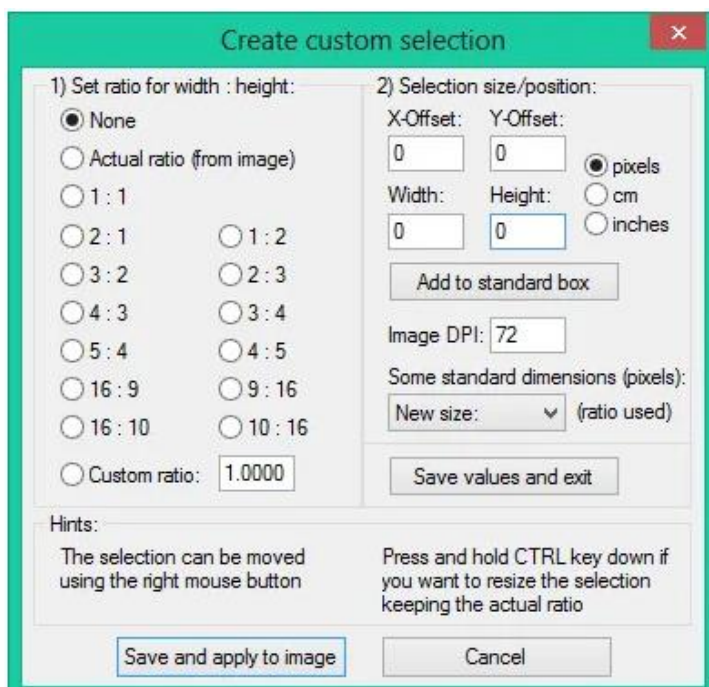


Here you can see the first three panels in a strip of 15, which is the usual number for FIRE. Notice in the bottom left corner that the strip is 3,000 pixels long and 200 high. We're going to cut that down considerably.

First select Edit>Create custom crop section

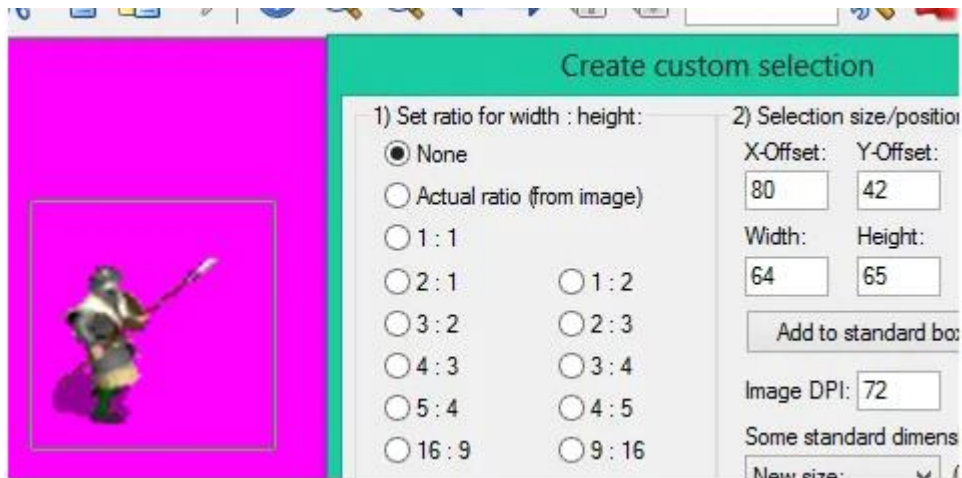


This box will appear:



All that we are interested in is 2) selection size/position on the right.

Normally for FIRE NE I would choose co-ordinates something like these:



so that the soldier is in the bottom left of a 64-by-65 box. In fact, these are the exact co-ordinates that I used for nearly all of Emperor1961's gun-wielding sprites, which I used for the Level 2 and 3 European nations. (Fortunately, the creators usually keep to a template).

Level 1 is a bit more difficult, however. The sprites have a variety of weapons, and swing them around in various ways. This sprite is holding a long pike, and he's going to draw it back before thrusting it forward. Adjustments might be necessary.

Now, there are 15 panels in a 3,000-pixel strip. That means that we would have to move the box 200 pixels to the right to move on to the next figure. In this strip the sprite pulls the pike back to the maximum in panel 4, so we need to change the X-offset to 680:



It's close, but just inside! Panel 9 has the maximum forward movement, so we need the X-offset to be 1680:

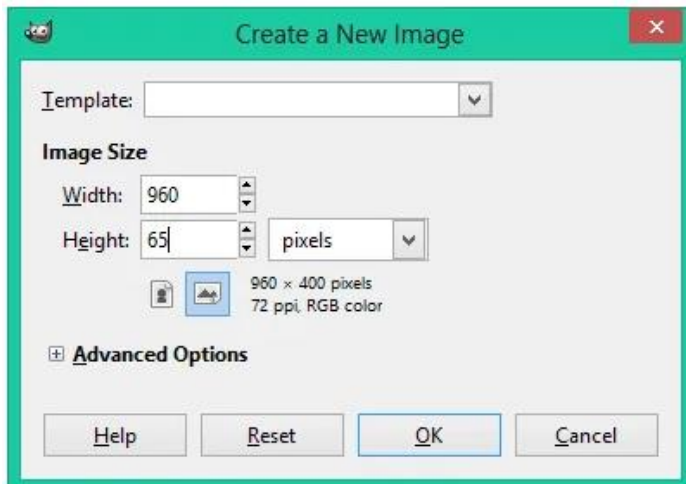


As Ace Ventura would say: "Like a glove!!!"

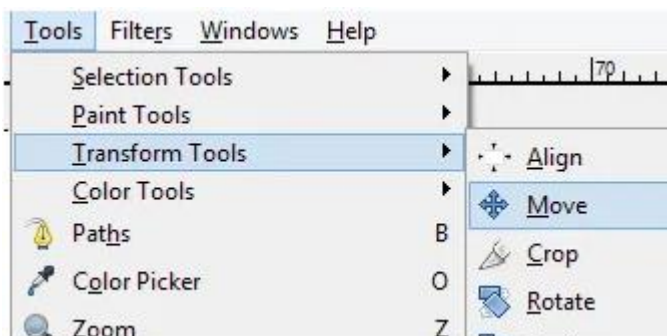
Obviously, if the pike had gone outside the box, we would have had to increase the width. You must make sure that the width is an even number though, or the sprite will shake slightly from side to side.

You need to have some empty space above the sprite so that it doesn't appear too high up in the combat window

OK, set the co-ordinates back for panel one, and open a new GIMP file. We're going to cut out each of the 15 figures and paste them in the new file. So, we need 15 times 64 for the width = 960, and 65 for the height.



Enlarge the GIMP image, then select Tools-Transform Tools-Move



Move the empty GIMP image to the far left. Then copy the first figure from Irfanview, and paste it in GIMP. Move the figure to the far left and press to anchor it in place.

Then add 200 to the X-Offset in Irfanview and copy and paste the second figure before moving it next to the first one:



Repeat this until all 15 figures are on the new GIMP strip. Then attach the palette (don't forget this) to your new strip.

Now you should have a FIRE NE sprite that is properly positioned in the combat window. This doesn't necessarily mean that it will be in exactly the right place on the map in your case, Basileios, but it should be much closer.

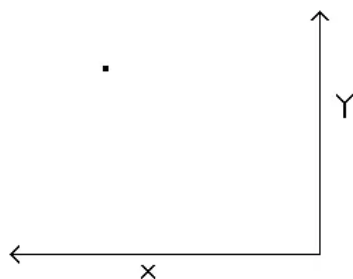
Let's have a look at the .spr files in Gfx/Map/Units. Here is the opened up Bohemian FIRE NE Level 1 file. Beneath is the opened up file of its Swedish counterpart, which I used in the previous post:

```
|Sprite = {  
  Bitmap = "T-ARMY C-BOH A-FIRE D-NE L-1.bmp"  
  Origin = { x = 30 y = 58 }  
  Frames = 15  
  Palette = "CS-BOH-ARMY-L1.bmp"  
  Speed = 5  
}
```

```
|Sprite = {  
  Bitmap = "T-ARMY C-SWE A-FIRE D-NE L-1.bmp"  
  Origin = { x = 35 y = 60 }  
  Frames = 15  
  Palette = "CS-SWE-ARMY-L1.bmp"  
  Speed = 5  
}
```

The part that determines where the sprite appears on the map is 'Origin'. Note that the values are slightly different. This is probably due to the fact that the Bohemian sprite has a sword and the Swedish one has a pike. I would imagine that your sprite is still slightly out of position, Basileios (at least when it comes to where I usually place the sprites on the map).

Here's a diagram to illustrate how to move the sprite on the map by altering the X and Y values.



Normally you would expect that in order to move the sprite west on the map, you would have to lower the number for X, but this is Paradox, and for some reason it's the opposite way round. You have to increase X to move west, and lower X to move east.

The Y co-ordinate works exactly as you would expect, however. In order to move the sprite north, you should increase the value of Y. To move the sprite south, lower Y.

One thing you should note is that you are dealing in pixels, so you only have to change the values by small amounts to move the sprite considerably. It's all about trial and error until you get it right.

Just a couple more comments about the .spr files:

Of course, the number by 'Frames' should be the same as the number of panels (or frames) in the strip, so in this case 15.

Another 'paradox' - the lower the number by 'Speed', the faster the animation!