

## Sudden Strike III Object Editor



This is the second book of the Sudden Strike 3 manual and is entirely dedicated to creating new units or any other objects that you would like to see in the game. Unfortunately, the developers did not leave any instructions about this, everything had to be learned by trial and error. I express my gratitude to Batus fashion, for left by them on the forums, brief notes on this issue, as well as players and veterans of modding the game Killer and Keltirulla.

(Malina)

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## Manual for creating objects. Section 1. (Programs)

To implement the model into the game, we need the 3D model itself, which can either be modeled by ourselves or found on the Internet, which is more rational. **Object editor** opens models only in the format **DirectX**. Scale Models adopted in full size, that is **1m** model equals **1m** meter in the game space **Sudden strike 3**. We need made or found models convert to **.X** format. To do this, we need a 3D editor such as e.g. **3D max** or **Blender 3D**. I prefer **Blender 3D** because it's free, easier to manage and no need to fiddle with plugins. If you are going to use **3D Max** for simulation or just for export found model to the object editor. You need a special plugin **kw Xporter for 3ds Max** which you will find on the official website <http://mjblosser.com/kwxportfor3dsmax/> The plugin is a file that you just need to paste it into the folder with the program **3D max**. You will need to select your version **3D Max** and download **plugin**. And if you you are using a very old version **3D Max** until 2009. Then the plugin is for you. **Panda DirectX Exporter** choose the appropriate version for your **3D Max** on the website [http://www.andytather.co.uk/panda/directxmax\\_downloads.asp](http://www.andytather.co.uk/panda/directxmax_downloads.asp) **3D Max** go to the folder where the program is installed and find the folder **plugins**, and paste the plugin file. But I recommend not messing with it all, but just choosing **Blender 3D** download on official website <https://www.blender.org/>

Working in **Blender 3D** go to settings, then add-ons( **addons**) select **import-export** and turn on **DirectX format**.

This completes the program settings.

After you have modeled or downloaded the model from the Internet by uploading it to **Blender 3D**, you need to prepare it for proper export to the game.

We also need a program **Total Commander** which you can download from official website for free <http://www.ghisler.com/> It will allow you to enter any game folders. For example, files with the extension **.pac** actually are archives with files that can be opened either **Total Commander**, either when the help of an archive **WinRAR** or the like. Download on the official website <http://rarlab.com/>

If you decide to just unpack **.pac** for the convenience of working with files. That so that the game and the editor see the new file location after unpacking the original files **.pack**

First, in case you suddenly make mistakes, create a backup copy of the files you need (**SS3.ini**, **DescEditor.ini**, **MPedit.ini**, **ObjectEditor.ini**).

Then open with notepad **DescEditor.ini** and remove the symbols from extensions " **.pack**". You will get the following result:

**[Mounts]**

**Decals=Media/Decals**

**Descs=Media/Descs**

**MapTextures=Media/MapTexture**

**Models=Media/Models**

**ModelTextures=Media/ModelTextures**

**Particles=Media/Particles**

**Profiles=Media/Profile**

**Sounds=Media/Sounds**

Then save **SS3.ini** and **ObjectEditor.ini**. Now do the same with **MapEditor.ini**, **apEdit.ini**, a same with **Commander.ini**.

After these manipulations, the game and all editors will read data directly from the newly opened unpacked folders, and editors will be able to open and save files directly, without having to use **WinRAR** or without the annoying procedure of archiving and unpacking using **WinRAR**.

You will also need a program to work with textures. Textures in the game have the file extension **.dds**. The program will help you to view such files. **xnview**, is a viewer for photos and any other images, and can also convert textures to any format. It's free, download on the official website <http://www.xnview.com/en/>

To create a texture, you can use **Adobe Photoshop**, not everyone has the possibility of using it, since the program is paid, then just use an equally good, but free program **GIMP** download from the official site <http://www.gimp.org/>

In order to pull any model from any other game, use the program **Ninja Ripper** <http://cgig.ru/ninjaripper/>

To convert the model so that it can then be inserted into **3D Max** or **Blender 3D** use **3D Object Converter\_6.0** it won't be hard to find and download from torrent for example from **rutracker.org**

## Model preparation. Section 2. (Blender 3D)

The first time you open the Object Editor, select **File =>Set Model x Folder** to you you will be prompted to select a folder from which the editor will take all your models **direct.x** made in **Blender 3D or3 Dmax** . If your models are not in this folder, the Model editor will not be able to select them. It probably makes more sense to create a folder **Model X** and put this folder inside your **Sudden Strike 3 \ Media \ Mods \ ModelX**

First, study the models that already exist in the game. To do this, load any model from the game by clicking **Files** and choose **open model**. Select the folder from which you need to upload the model and upload it. Next click on the tools tab



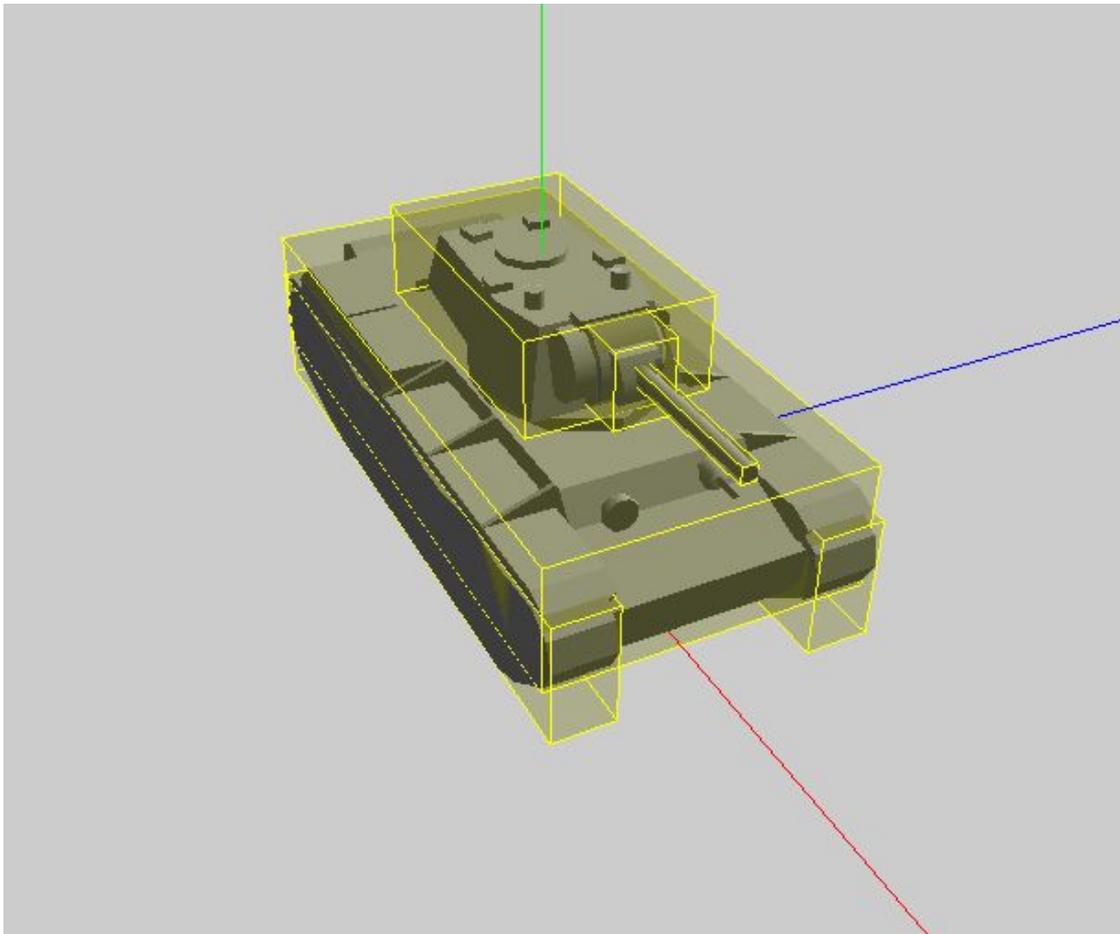
to turn on the display into which parts the object is divided. In this case, the KV1 tank is divided into

**right track treck\_right left track treck\_left body body**

**tower turret\_01**

**grenade launcher stosl\_01**

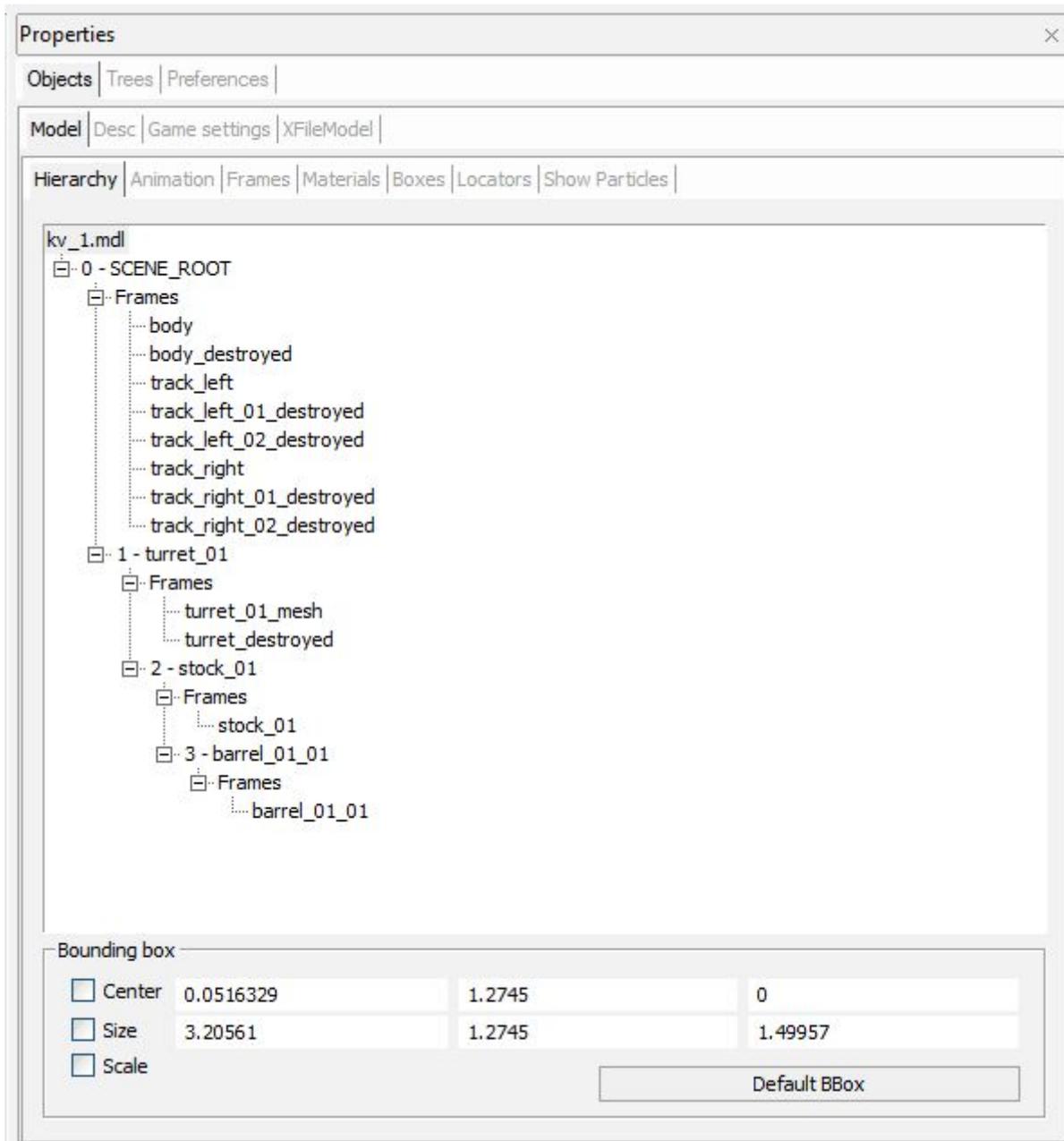
**cannon barrel\_01**



The parts are highlighted in yellow. The model is rotated with the

**Ctrl + right mouse button**

On the right is the model parameters window

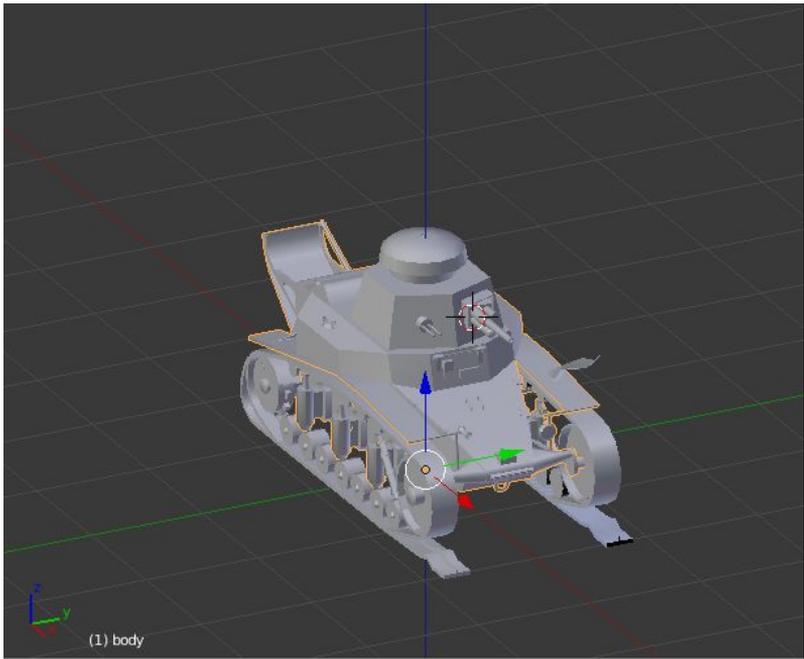


On the first tab **Hierarchy** the hierarchy of object parts is displayed. For example a cannon **barrel\_01** associated with the grenade launcher **stock\_01**, and the grenade launcher with the tower **turret\_01**.

Also in the hierarchy you can see parts with a postscript\_ **destroyed**, for example **body\_destroyed** these are the destroyed parts of the object that will be displayed in the game when the tank is hit or destroyed. By clicking on the inscription with the mouse, a part of the tank is selected and its coordinate axis is displayed. Which means something like the pivot point of an object. Carefully look at where the coordinate axis of each part is,

to make it more convenient to do this, turn off the main coordinate axis. As you can see, the fulcrum at the body **body**, located at the zero point of coordinates, under the bottom of the tank

at ground level. You can turn on the display of the earth with the button . For other parts tank, turret, grenade launcher and gun, the coordinate axis is higher, above the hull. just take a close look. This is necessary in order to understand where to make a fulcrum in **3D max** or **B 3D lender** for each part of the tank. Here a few examples of what it looks like **Blender 3D**:

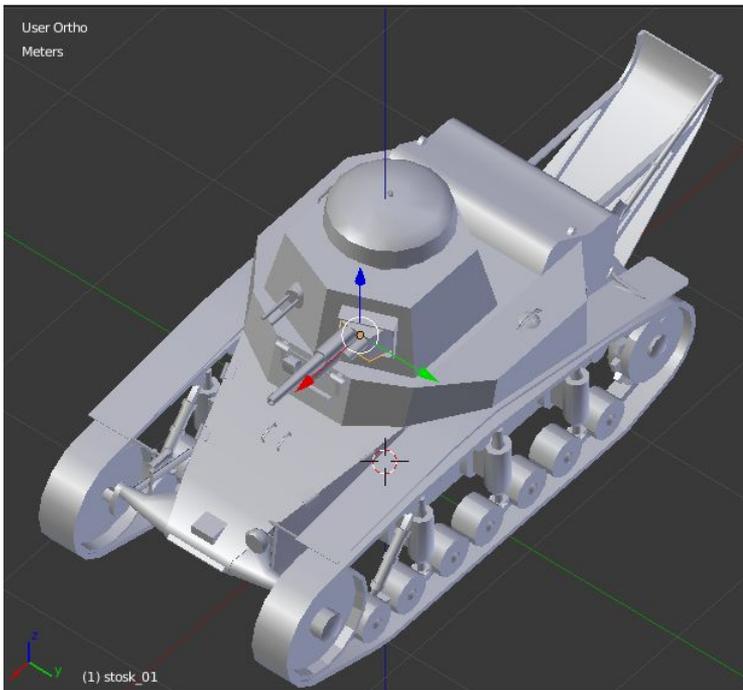


As you can see for the body **body\_t** the coordinate axis support point is set, to the point **0,0,0**.

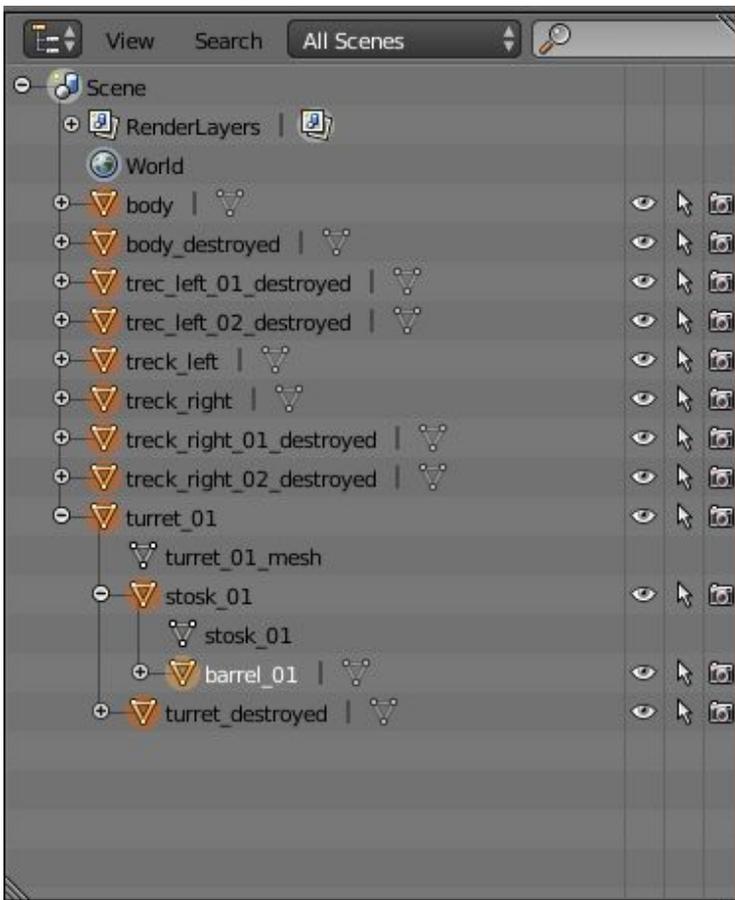
For the tower **turret\_01** the fulcrum is set higher, the tower rests on the hull, as shown below.



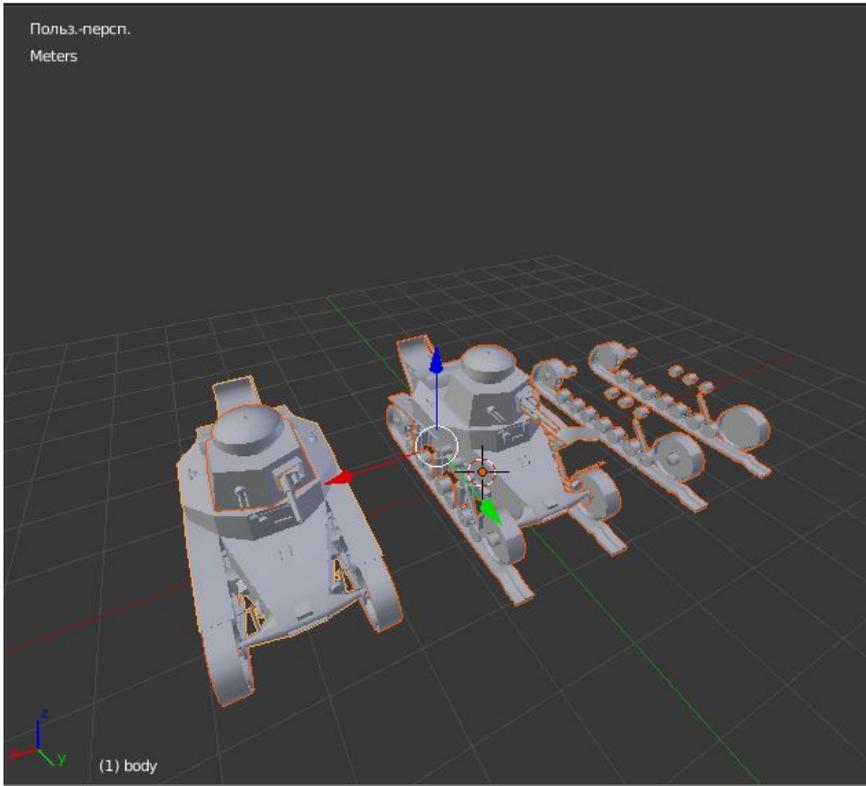
For grenade launcher **stosk\_01** the support point is located at the junction with the tower. Accordingly, the fulcrum of the gun **barrel\_01** will go at the junction with the grenade launcher.



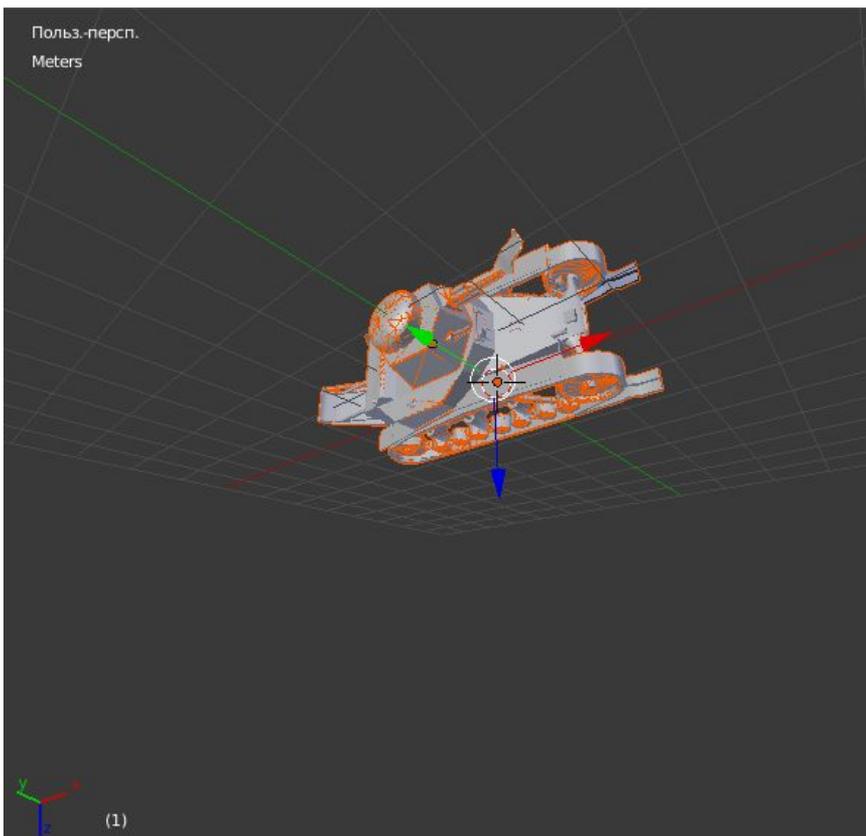
The parts hierarchy in Blender would look like this:



It is necessary not only to create a model of the object, but also to create its destroyed parts:



Then all the parts of the object, together with the destroyed parts, should be collected by shifting them into one heap. As well as rotate objects and align along the axes as shown below:

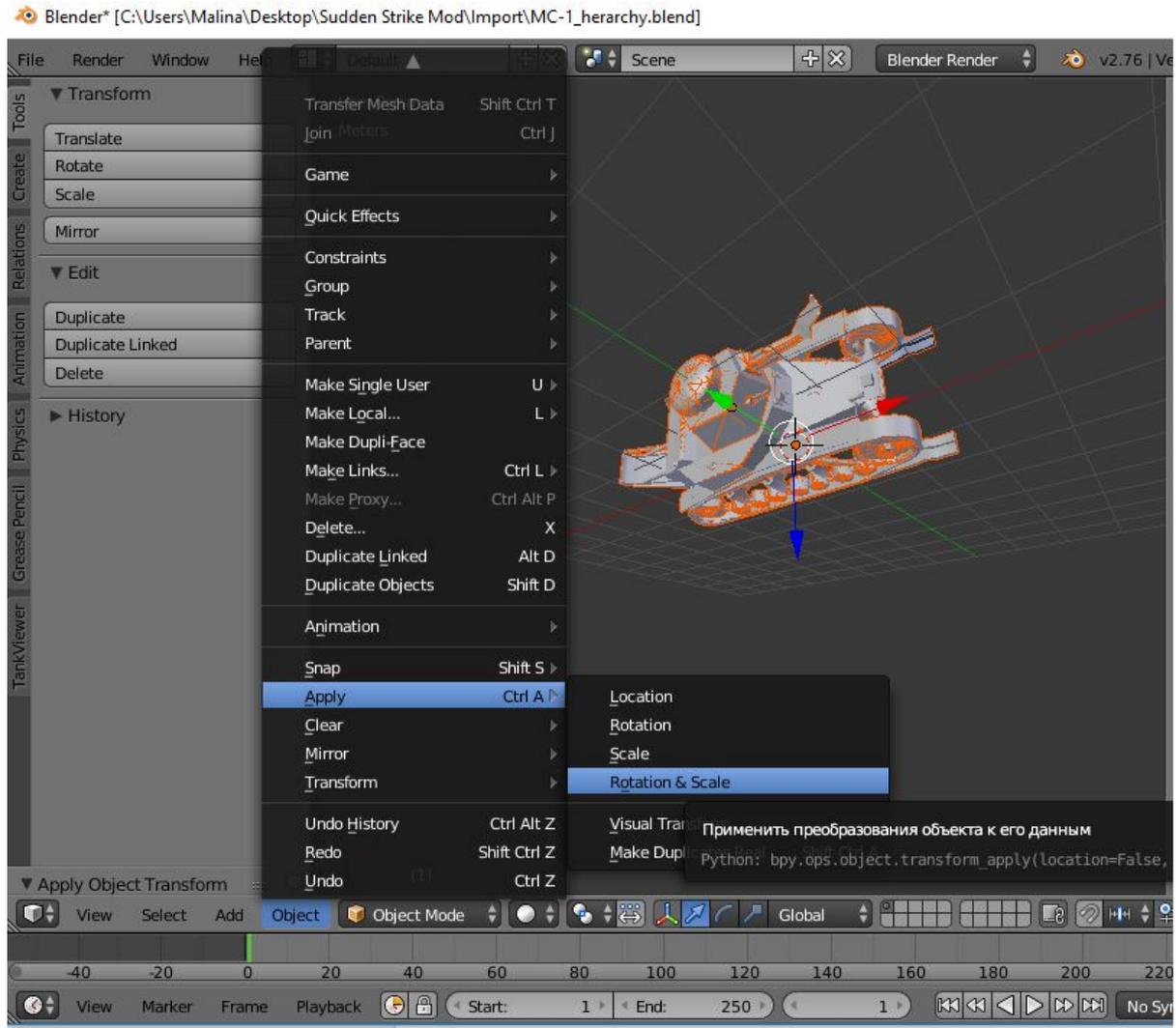


Pay attention to which direction the coordinate axes are located axis, shows the direction up.

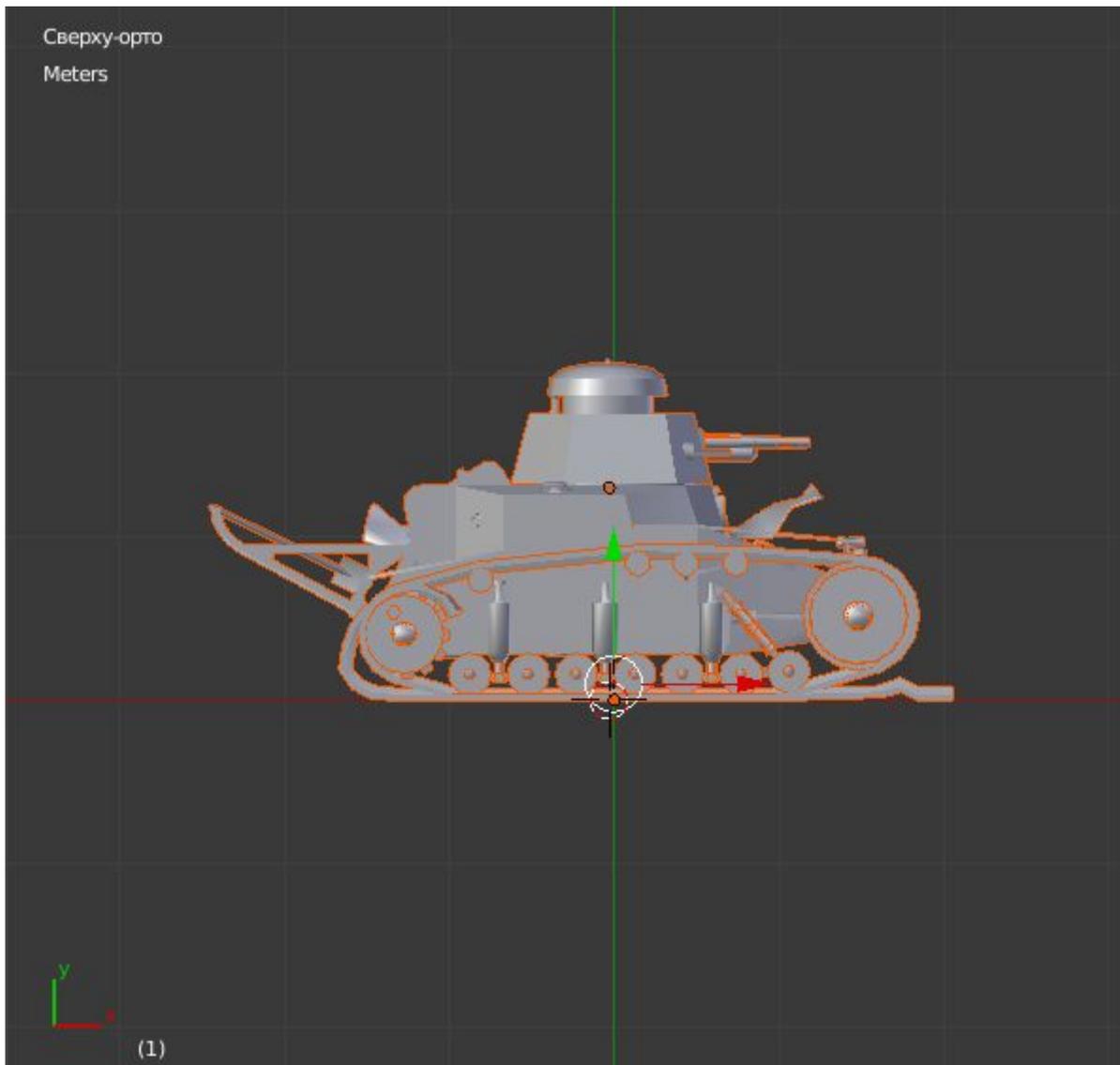
**Y axis** green

**X axis** the red axis shows the forward direction. **Z axis**  
the blue axis shows the direction to the side

If you work in **Blender 3D**, that is, a feature of this editor, after turning and to align the model along the desired axes, you must confirm this position by pressing **Object / Apply / Rotation & Scale** (apply rotation and scale)



The easiest way to check that the object is located in space correctly is to select the top view by pressing on the keyboard **N** **um pad** number **7**. should be like this as below:

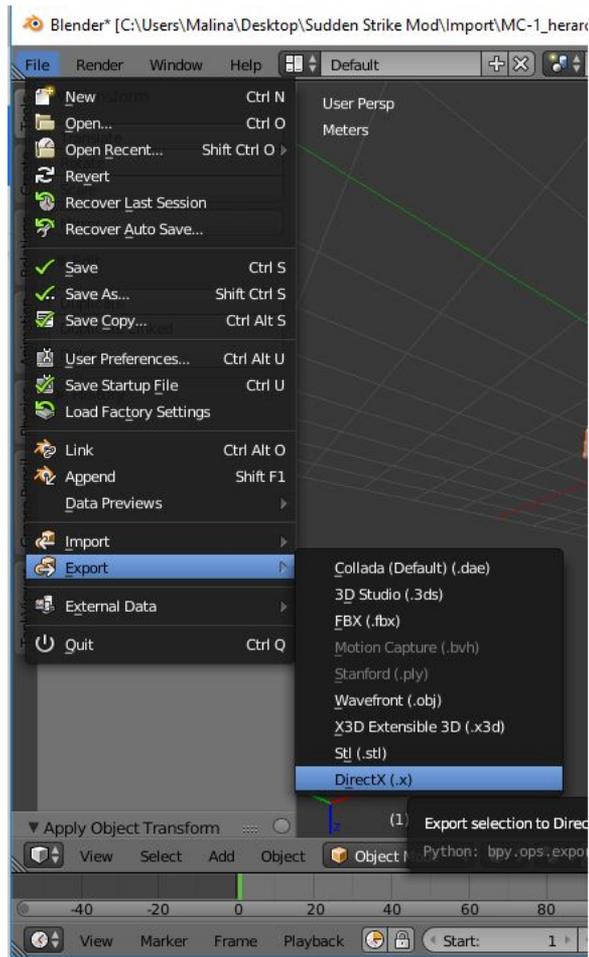


The last thing to do for the model is to create **UV map unwrapping textures** . It's like the skin on the object, the color with which our tank will be painted. I will not tell you how this is done, for this there is a lot of literature on the Internet and video lessons on **YouTube** . Just enter in the search engine **UV unwrapping** and you will definitely find how to do it, it is not difficult especially if you do it in **Blender 3D** . If you load the model into the object editor without **UV Maps**, you don't have it turns out to generate a model, it will be generated incorrectly.

After everything is ready, you can start exporting the model to the object editor **SS3\_object\_Editor** . Don't forget to enable the exporter **DirectX format** how it was said at the beginning of the manual.

## Export model to SS3 object Editor . Section 3

Select all parts of the tank model and export the model as shown in the pictures below:



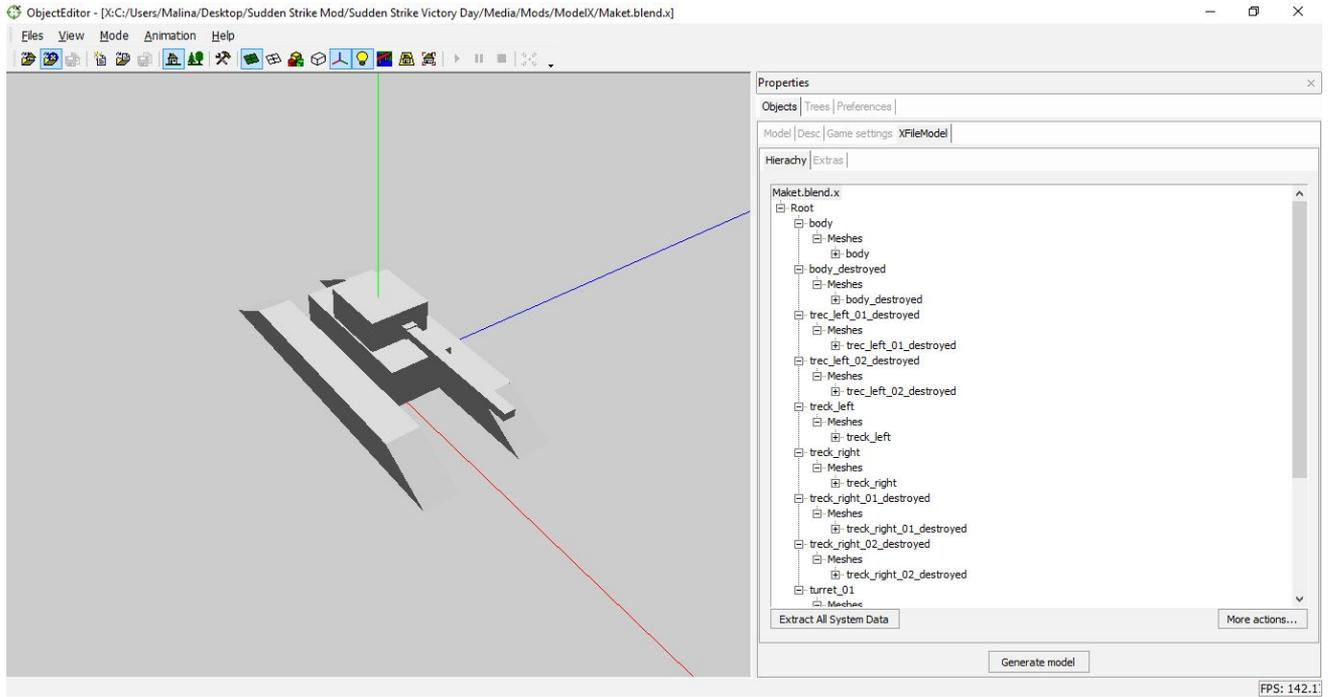
Be sure to specify in the export options  
**coordinate: Right Handed Up Axis: Z**

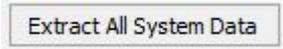
As highlighted in red below

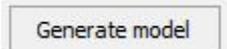


Next, click export, and if everything was done correctly, then when you open the model in the object editor **SS3 object editor**, you will see the following picture. I will show on the example of a tank layout made in haste especially for the example.

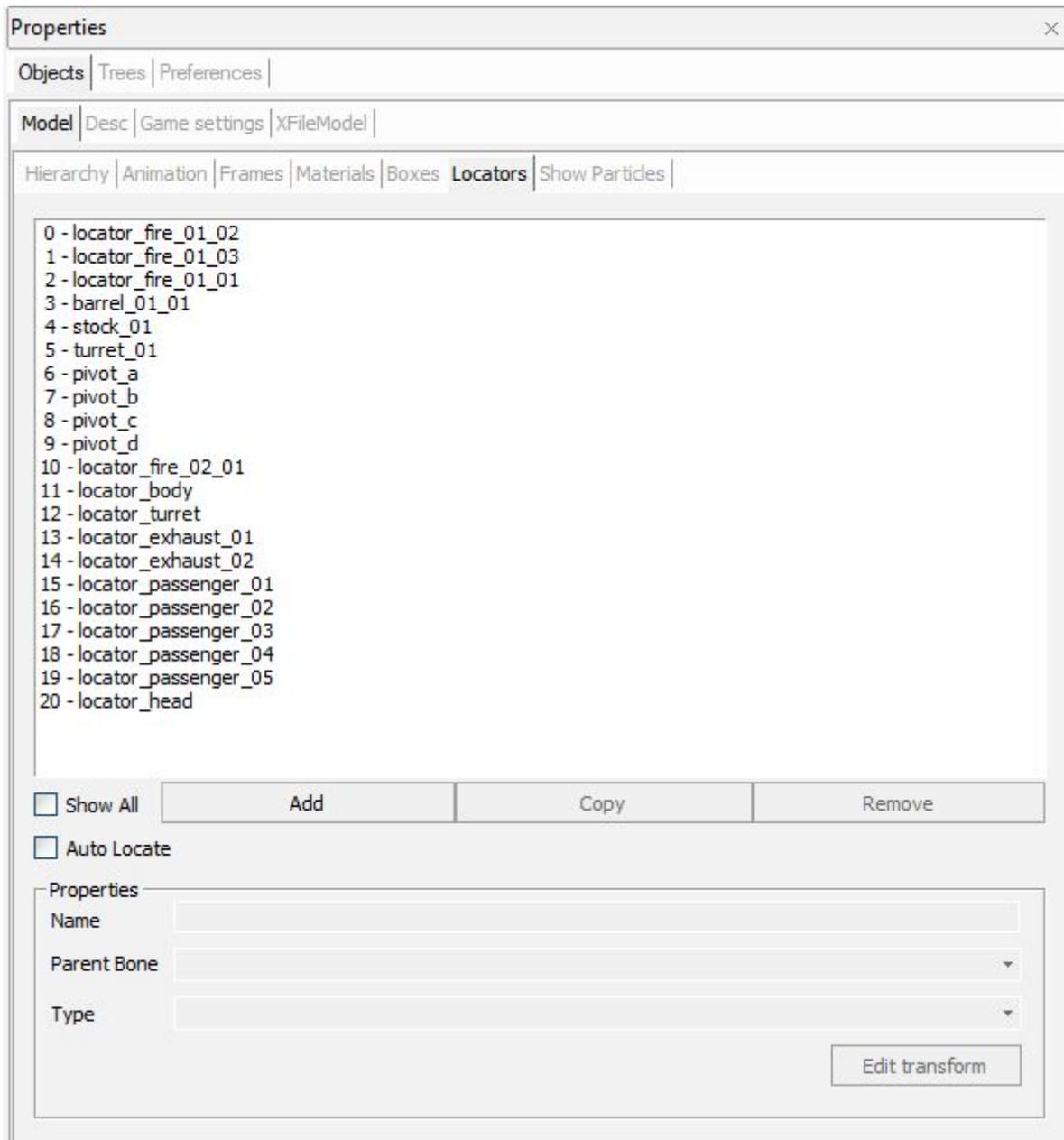
With the object editor open, click load Open X Model you have  select the folder where exported the model and load it.



Next click  and the editor will automatically collect all loaded model information. Further, if the object hierarchy is

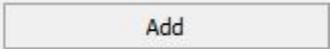
match the models that are already in the game, then click after  which the model will be generated.

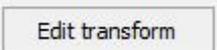
Next, go to the tab  where it will be necessary to specify additional points for the object. Smoke exhaust points, firing points and landing points. points of support of the caterpillars on the ground. To do this, carefully study the models already existing in the game. In this example, I make the layout of the tank in the image of the tank **To IN 1.**

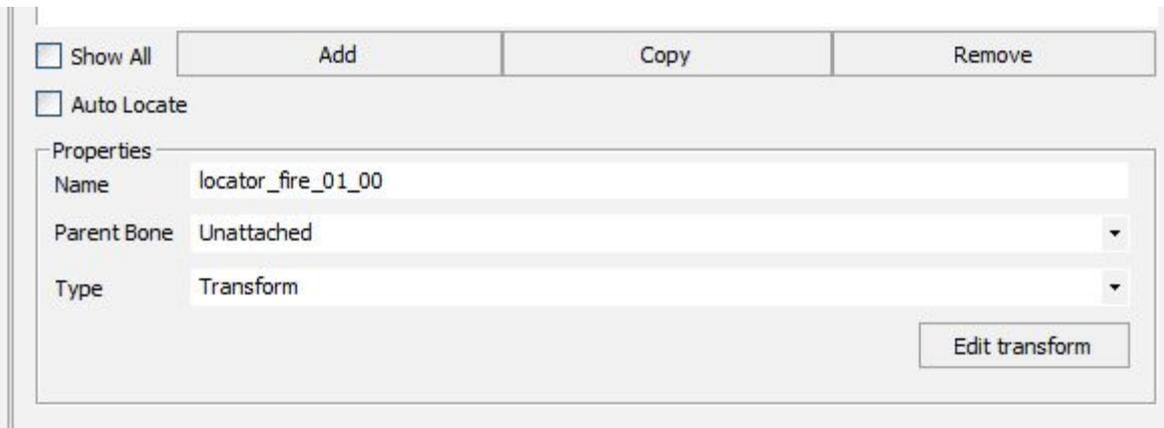


Create exactly the same locators as the original model. To do this, first delete those that were created automatically by the editor with the button:

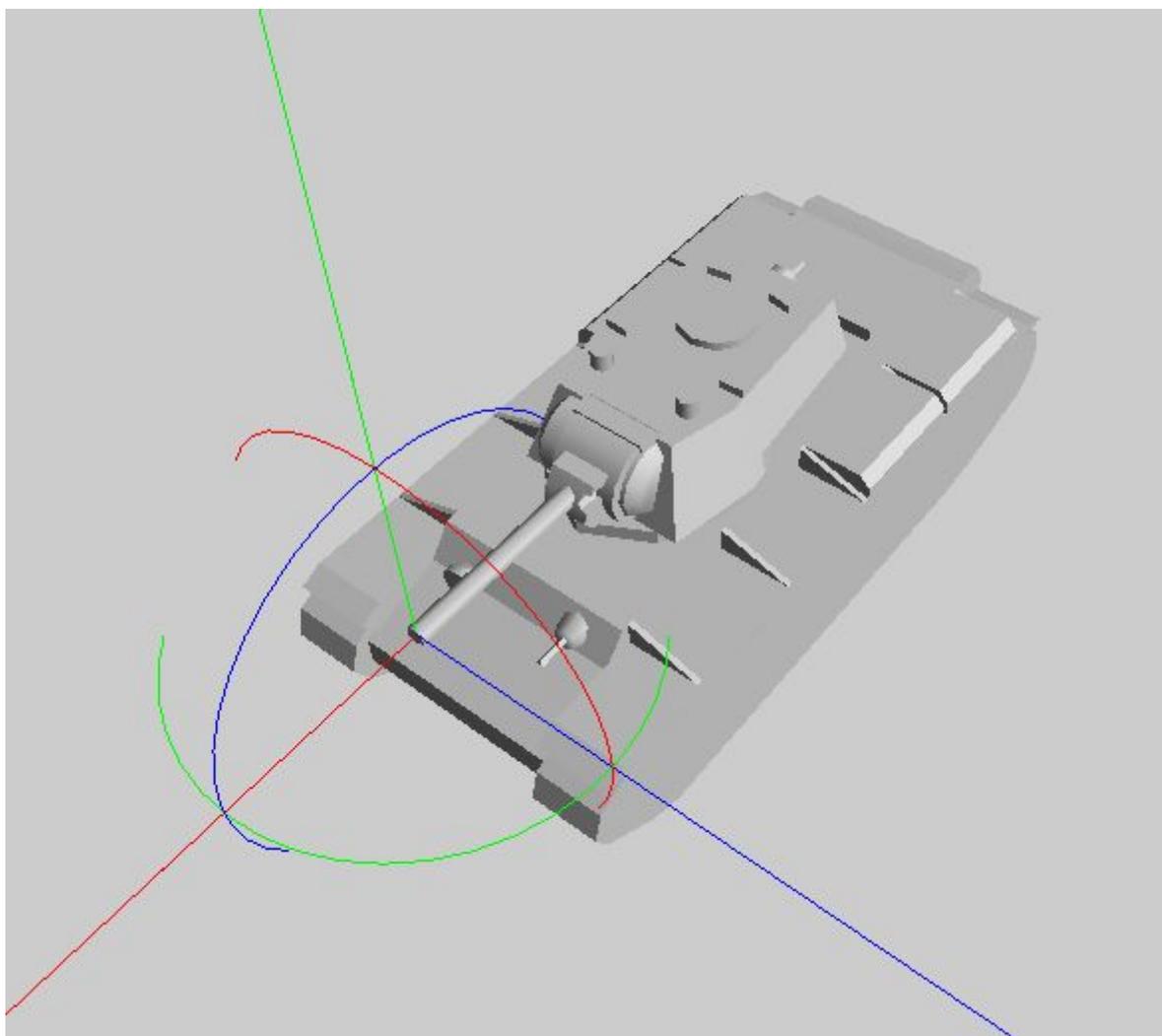


Next, create the necessary locators by clicking on the  give button the name of each created locator **Name** according to the original model from the game. Ask **Parent Bone**, and also **type**.

Next click  . The new coordinate axis of the corresponding locator. Drag it with the mouse to set the axis to the desired point.



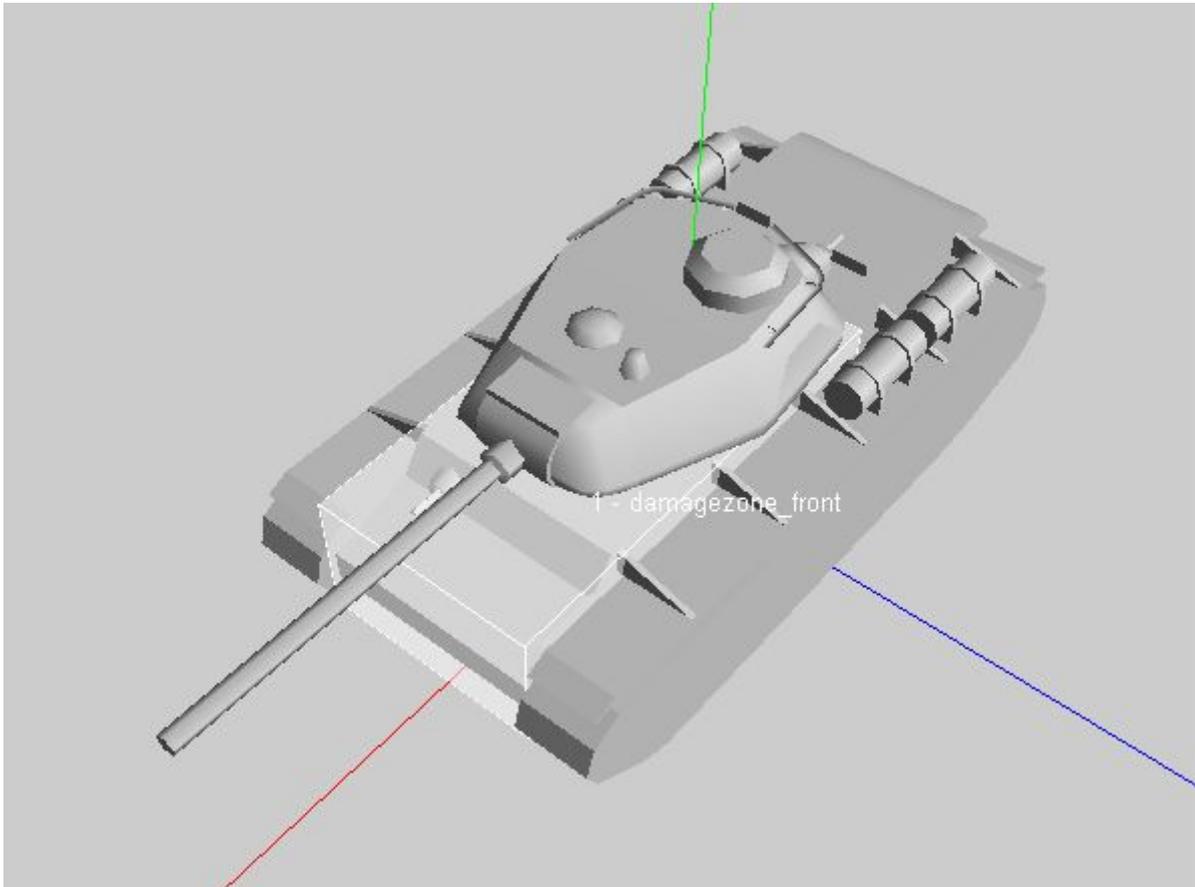
For example, set the locator **2 locator\_fire\_01\_01**. This locator is responsible for the point tank gun shots. So let's drag it to the tip of the gun. Circular axes can be rotated by changing the direction of the axes.



Below I have written the locators and their types in a table, to save time, you can simply copy the inscription and paste it into the editor.

	<b>Name</b>	<b>parent bone</b>	<b>type</b>
0	locator_fire_01_02	turrent_01	Transform
one	locator_fire_01_03	turrent_01	Transform
2	locator_fire_01_01	barrel_01_01	Transform
3	barrel_01_01	barrel_01_01	Bone
four	stock_01	stock_01	Bone
5	turrent_01	turrent_01	Bone
6	pivot_a	unattached	point
7	pivot_b	unattached	point
eight	pivot_c	unattached	point
9	pivot_d	unattached	point
ten	locator_fire_02_01	unattached	Transform
eleven	locator_body	unattached	Transform
12	locatore_turret	unattached	Transform
13	locatore_exhaust_01	unattached	Transform
fourteen	locatore_exhaust_02	unattached	Transform
fifteen	locatore_passenger_01	unattached	Transform
16	locatore_passenger_02	unattached	Transform
17	locatore_passenger_03	unattached	Transform
eighteen	locatore_passenger_04	unattached	Transform
19	locatore_passenger_05	unattached	Transform
twenty	locator_head	turrent_01	Transform

Next, go to the tab **Boxes** where it is necessary to create tank damage zones. And also specify the necessary locators for them.



To specify the damage zone, click the button assign  . Set a name **Name** and the required **Assigned locator** in the likeness of the original model, which is already is in the game.

**Properties**

Name

**Box**

<input checked="" type="checkbox"/> Center	<input type="text" value="1.02436"/>	<input type="text" value="0.973699"/>	<input type="text" value="0.00175822"/>
<input type="checkbox"/> Size	<input type="text" value="2.02964"/>	<input type="text" value="0.577456"/>	<input type="text" value="0.983708"/>
<input type="checkbox"/> Scale			

Assigned locator

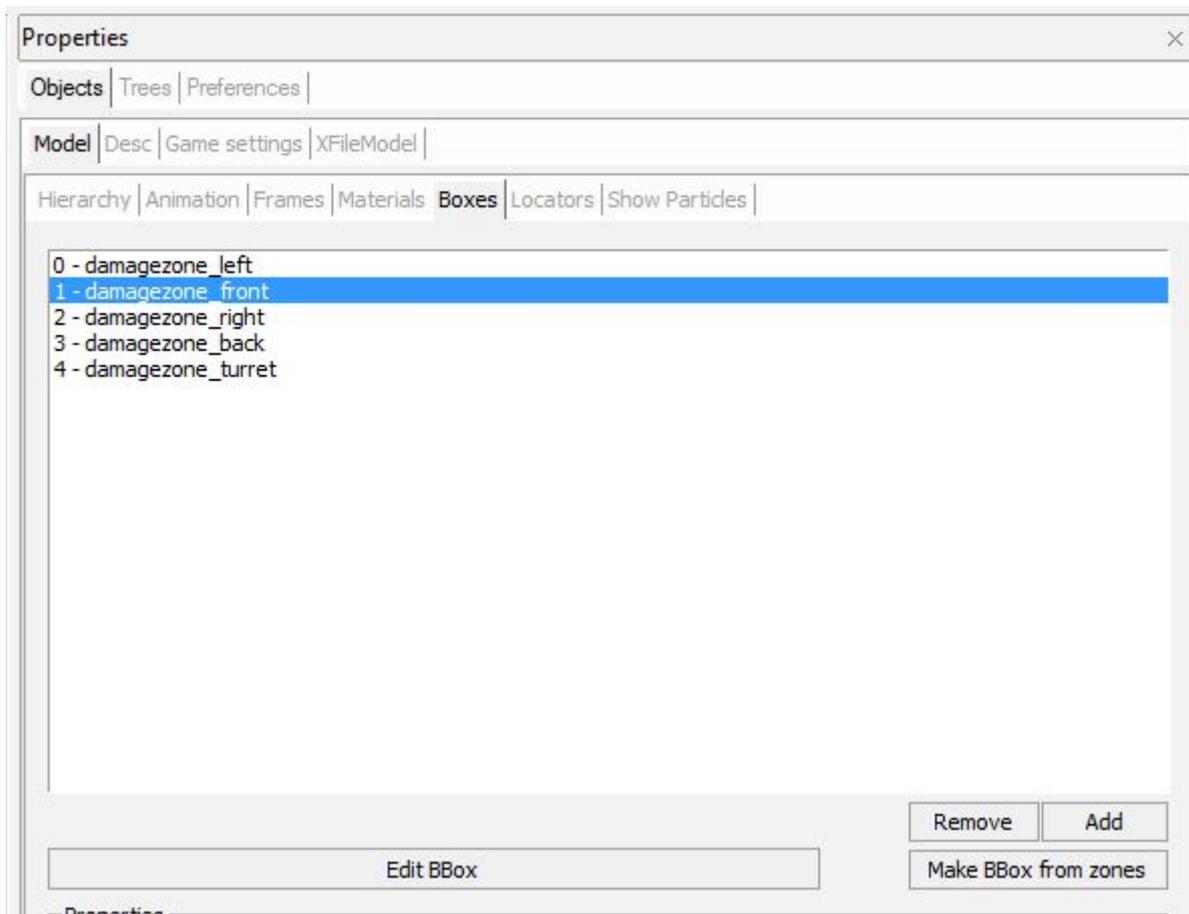
Next, using the functions **Center** **Size** by rearranging the marker, adjust each zone damage by moving the coordinate axis with the mouse.

**Center** displacement of the damage zone  
**Size** zone size control

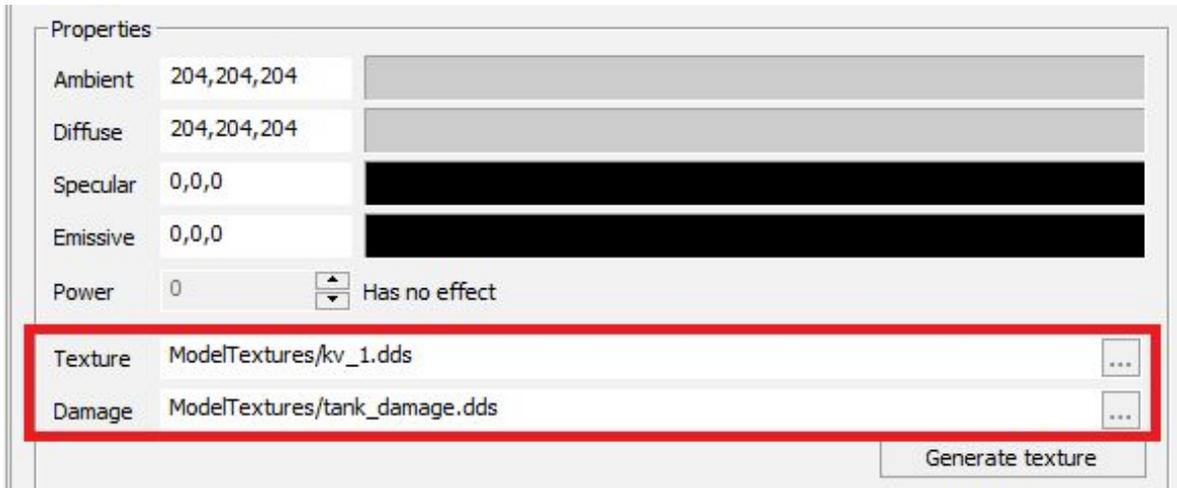
For convenience, you can take the names from the table below. The table is based on the example of a tank **KV1**.

	Name	Assigned locator	
one	damagezone_left	1 None	Left side
2	damagezone_front	1 None	Front armor
3	damagezone_right	1 None	Starboard
four	damagezone_back	1 None	Rear armor
5	damagezone_turrent	locatore_turret	Tower

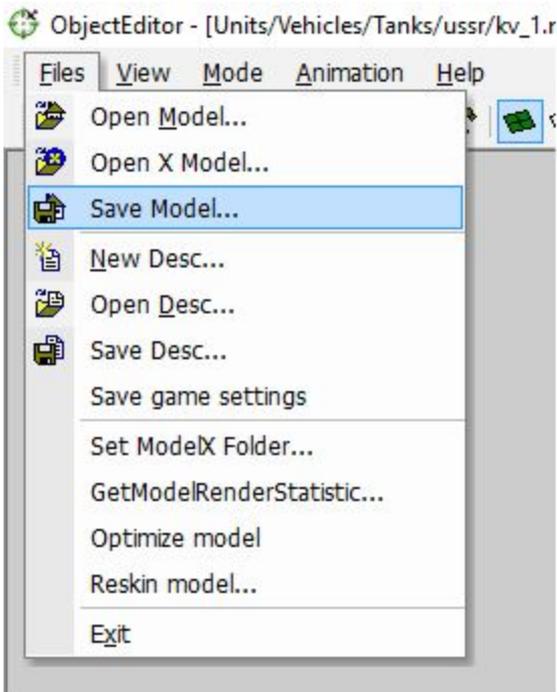
You should get the following:



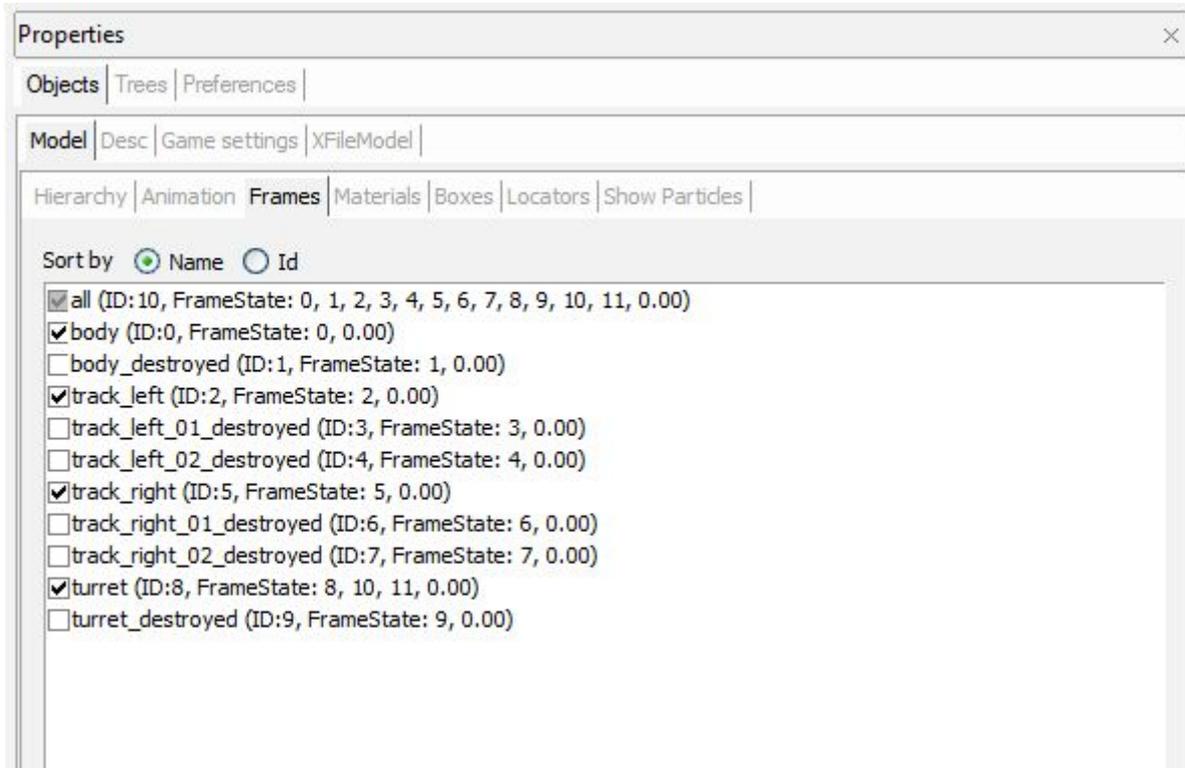
Next, go to the tab **Materials** where to assign to our model texture. For normal model and for damaged model. Place the prepared textures in the folder **Media\Mods\ModelTextures** and select them in the editor.



Or go to **Files => Reskin models** where you can also set textures for the model  
 After the texture is assigned to the model, it can already be pre-saved and finished later.  
 To do this, click **Files => Save Model** select to save  
 folder **Media\Mods\Models** Give the model a name and also add **.mdl** asking  
 thus the format of the saved model **.mdl**.



Next, go to the tab **Frames** where we remove the markers from the damaged parts  
 tank, leaving only those parts that the object should have when it has no damage.  
 As shown below:



Further, if you have already saved, then the texture from the tank has disappeared, it will have to be assigned again, as shown above. Then you can save the model again.

This completes the creation of the model. Now you need to set the characteristics of the model by creating for it **Desc**.

### What is a desc file. Section 4

The game uses several files, each with its own function, which together make up **3d model** in the game, as well as shots, explosions, sounds, and other characteristics of this model.

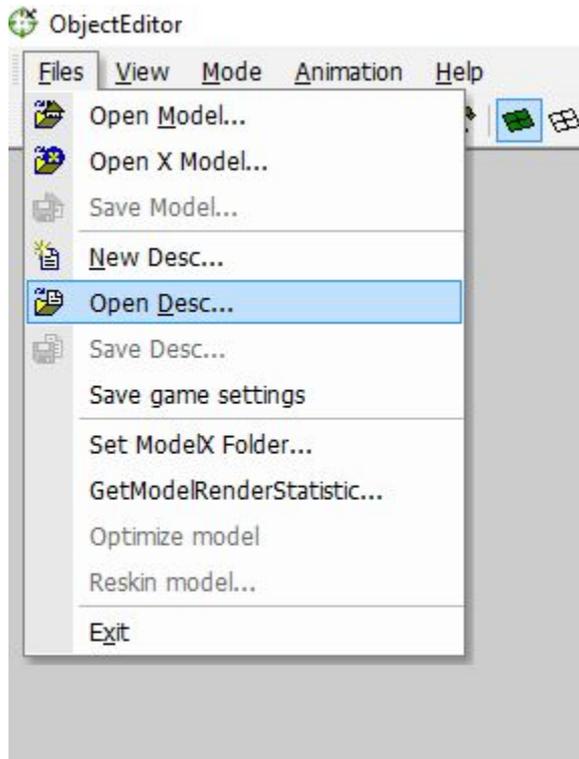
Each unit and object has its own **D esc** file. It looks like this:

**DirectX** the model makes a request for data in **.pack** where is **vile3 D models c** extension **.mdl**, which in turn makes its request to **D esc** file, combining characteristics, sounds, weapons, and so on into one whole to create a complete picture of the animation of the game model.

The easiest way for the first time is to download the one already in the game **D esc** file from a similar according to the characteristics of the model. And make changes to taste, at your discretion.

It's much easier than creating **Desc** file from scratch.

Download **Desc** file from the original model



Change the title and location first

**Desc** file, as well as **name-id**

Properties

Objects | Trees | Preferences

Model Desc | Game settings | XFileModel

Model class: Tank

TankDesc	
Name	<b>Maket</b>
NameId	<b>30000</b>
ModelName	<b>Mods/Maket.mdl</b>
BoundingRadius	<b>3.20561</b>
UnitType	<b>tank</b>
TargetType	<b>Tank</b>
TargetCost	<b>25</b>
Tag	<b>2</b>
DamageDiagramIndex	<b>0</b>
Fuel	<b>600</b>
Ammo	<b>0</b>
SupplyType	<b>Unknown</b>
SupplyRate	<b>100</b>
Health	<b>1600</b>
HealthBarSize	<b>16</b>
Transparency	<b>0</b>
VehiclePassability	<b>100</b>
HumanPassability	<b>100</b>
IgnoreSquare	<b>-1</b>
FullSquare	<b>1</b>

Open selected in new OE

Make icon | Edit .inf

Load model

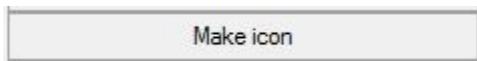
FPS: 228.5

I will assign for example **Name ID** 3000 since most likely there is no object in the game with such big serial number. Each object in the game has its own unique **Id**. By idea if you create **Desc** file from scratch and you are trying to assign already existing **Name**, the editor should report the error. However, this may not happen, for various reasons, for example, if your object editor is not in the directory with the game, but separately from it.

The remaining characteristics for the first time can not be changed. We will change them later when we are sure that the model can be loaded into the game.

**ModelName** click on the line where the path to the file is indicated, three dots will appear to the right of titles. Click on them and choose the path to **Media\Mods\Models** choosing your model.

You can also make a sketch of the model that will be displayed in the map editor when you select a given unit or object, using the button



the sketch will be saved in the folder **Media\Mods\Descs** in the format **icon.dds**

**PS** Of course, not all the features of the editor are given here, for example, the editor allows you to generate trees, as well as work with animation, to work with infantry and guns. As for the creation of buildings, they are made in the same way as the considered example with tanks.

After studying this editor, you can create any object.

Have a nice game)