

Arktos Tools is a utility pack that makes a game developer life easier. It contains 3 modules: Batch Object Rescale Tool, Animation to Bones Tool and Object Reskinner.

To install the script download here:

[Download Arktos Tools Script ArktosTools.zip](#)

**Warning! Please close 3Ds Max before install/uninstall operations! Follow the instructions. You can also install the script manually by copying the content of this archive file into the following folder on your computer: ...3ds Max xxxScriptsStartup**

To update the script you need to delete ArktosTools:

*Customize > Customize User Interface > Menu > ArktosTools*

You also need to delete ArktosTools.mcr from here:

*C:\Documents and Settings ("Users" for Vista or Win7)\Administrator\Local Settings\Application Data\Autodesk\3dsmax2009 - 32bit (or your version of 3ds Max)\enu\Ulusermacros*

Then you need to install the script manually by copying the files into corresponding folder. This file is generated automatically when starting the script for the first time. It is also added automatically to the installed version of 3ds Max.

**Please follow the instructions precisely, otherwise the script will not be installed**

correctly and the new menu tab 'Collision Generator' will not be added. Sorry for the inconvenience, this is how script Interface in 3ds Max works. Once you install the script and launch 3ds max, you will see a new tab "ArktosTools" in the upper menu (next to the "Help" tab). Open it and choose "menu item..." to open the options.

### Animation to Bones Tool

Consists of 2 modules: ObjectToBones! и VertexToBones!

#### ObjectToBones!

This module allows you to convert multiple objects with animations into one skinned object with one animation. This procedure allows you to decrease the number of DrawCalls and the speed of rendering animated objects. Also if you're using an old engine that supports only Bones Animation this method helps you enhance and diversify your animations. In Unity 3d and Unreal Engine this method allows you to increase the performance of your builds on mobile devices.

How it works:

- Select some objects that have animations (translate, rotation, scale)
- Press ObjectToBones!
- Now we have one skinned object with multiple bones. All the materials are merged into one multi/sub material.

How it works video:

{youtube}KtJ8Zm86ZL0{/youtube}

### **VertexToBones!**

It's very useful if you're using an engine that doesn't support cloth/soft body simulation. Your Unity 3d and Unreal Engine mobile projects can have complex animations using only skin and bones. This method allows you to convert vertex animation to skinned animation. For each vertex an object has a bone is created (you can control the vertex-assigning process manually). Once it's done the object is copied and the skin modifier (containing all the previously created bones) is assigned to it.

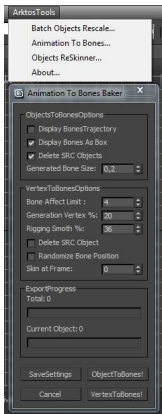
How it works:

- Pick ONE object that uses vertex animationsimulation.
- Press VertexToBones!
- You get the exact copy of the source object but with bones attached to its vertexes. These bones will be used to animate the object almost in the same way as the source object is animated.

How it works video:

{youtube}tr7RbIF\_m9o{/youtube}

Here are some tips on how to use the interface:



## Display Bones Trajectory:

Shows a bone's trajectory

## Display Bones As Box:

Displays bones as boxes to optimize the viewport performance. Highly useful when using lots of bones.

## Delete SRC Objects:

Deletes the source objects. Can be useful when creating batch scenes.

### **Bone Affect Limit:**

Sets the max number of bones that can affect a vertex. In most 3d engines this number is 4.

### **Generated Bones Size:**

Increases/decreases bones' size. You might want to use it if you have too many bones and you don't want your scene to look messy.

### **Generation Vertex%:**

Sets the number of generated bones as a percentage of the number of vertexes the source object has. Please mind that values over 10% can decrease performance dramatically.

### **Rigging Smooth%:**

Sets the smoothing radius that a bone uses to affect a vertex. The larger this value is the smoother the animation is.

### **Randomize Bone Position:**

Randomizes the bones' position. If your **Generation Vertex%** value is small this method gives the best result.

### **Skin At Frame:**

Performs skinning at a certain frame. In some cases this option helps to get a better result if the source object's geo is too complex and it's overlapping itself when animated.

### **Save Settings:**

Saves all the current settings including input and output paths.

## **Object Reskinner**

Allows you to transfer skinning options from one object to another object that has a different number of vertexes and bones and also a different hierarchy of bones. You might want to use this method if, for example, your character has several similar pieces of cloth (their shapes need to be similar, but the number of vertexes and triangles can be different, these objects can have different materials assigned to them as well).

Please mind that some inconsistency might occur when processing vertexes: 1-3% of vertexes' weights might need manual adjustment.

Here are some tips on how to use the interface:

### **Use Linear Interpolation:**

Not implemented yet.

### **Use Heuristics Analysis:**

Not implemented yet.

### **Delete SRC Object:**

Deletes Source Object after all Operations.

### **Select Source Object:**

Pick an object you want to perform the skin transfer on. Source object must be Editable Mesh and have Skin Modifier.

### **Select Target Object:**

Pick a target object. It must be Editable Mesh.

### **Save Settings:**

Saves all the current settings including input and output paths.



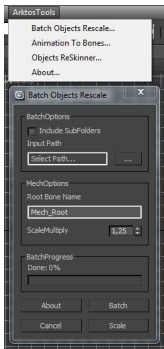
How it works video:

{youtube}bc9zuarpCA0{/youtube}

## Batch Object Rescale Tool

allows you to scale multiple skinned objects in different files and save them as the same files. It is meant that each scene should have only one skinned object with bone hierarchy. An object is scaled using its root bone's pivot as a center of transformation. A dummy object is created in the scene.

Here are some tips on how to use the interface:



### Include Subfolders:

Simply Includes Subfolders:)

### **Input Path:**

Sets the path to the \*.max files you want to process.

### **Root Bone Name:**

Sets the name of a bone in a scene that will act as a root bone (will be used as a center of transformation). The name of the root bone should be the same in all processed scenes.

### **Scale Multiply:**

Sets the number that will be used as a multiplier for your scene's scaling transformation.

### **Save Settings:**

Saves all the current settings including input and output paths

### **Contact**

If you have any questions or troubles with tools, please contact me: [alexey.vlasov@arktosentertainment.com](mailto:alexey.vlasov@arktosentertainment.com)

Don't forget to attach your 3ds max scene (including textures). Please reduce the size of your textures to a minimum.

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