Universal Material Converter 1.3 build 21 november 2016

This script is based on the Autodesk Material Converter. However, it is much more flexible and will get updates in the future to support even more materials and renderengines.
This script give you the option to convert at least the basic materials of several renderengines to any other supported renderengines materials. With this conversion some of the renderengine-specific textures are also converted.

In version 1.0:
- conversion from Autodesk Materials and textures
- conversion from and to Arch&Design material and textures
- conversion from and to V-Ray materials and textures
- conversion from and to iRay material and textures
- conversion from and to Corona materials and textures
- conversion from and to Standard material including option to bake procedural materials. This option is build to export materials to use with VR-engines like Unity and Unreal.
- conversion from and to ART Physical material and supported textures
- check for duplicate materials (check by name) and make them instances
- check for incompatible materials and either leave them as is, or replace them with a default material with a chosen color.
- UMC is released with an installer and node-locked license system.
- an option to replace incompatible materials
- an option to mute the messages (significant speed boost)
- autodetection of available renderengines

In version 1.2: (1.1 was skipped in the naming, it was mainly a bugfix version)
- better installer
- icons added for use in toolbar
- conversion of renderengine specific textures started. Not all textures are possible to support, but things like blends, multimaps, bitmap/hdrs, normal maps, dirt maps, have been added to be converted between all supported renderengines.
- Support for unlimited nested textures
- option to remove incompatible textures added

In version 1.3:
- some bugfixes and tweaks for better conversion
- support for GTA3 material, VrayOverrideMaterial
- support for some textures that weren't supported yet
- added a VR mode, to change diffuse color settings to be shown correctly in Unity or Unreal after export
- added subdiv/samples override, to set a default value for the materials assign to all (selected) objects
- added dispersion override, to uncheck dispersion when converting to V-Ray
- added support for Blend materials with used materials that are empty.
- Fixed a transparancy conversion bug when converting to or from iRay.

In upcoming releases: Support for Maxwellrender is on its way. Support for Octane has halted for now. The next update will have better support for the iRay conversion.

Installation:
To install the script, just drag the .mzp file into 3dsMax and drop it in a viewport.
(it this doesn't work, just start the installer.ms file. Go to the Maxscript menu → run Script and select installer.ms)
After installation is finished, you can go to Customize → Customize User Interface to add a shortcut to the script.

Licensing:
The script will need a license before you can use it. After you installed the script, you can run it for the first time. The script will not find a licensefile and therefor show a rollout where you can save a .dat file. Send this .dat-file to info@3dstudio.nl and you'll get a license file in return. To install the license, run the script and choose → load licensefile. It will copy the license to the correct destination and enable the usage of the script.

Usage:
When you run the script, the script will check for a license and open up a small window.
You will see several options which you need to set before the conversion. You will need to choose the renderengine that you want to convert to, if you want to convert the whole scene or just a part of it, what to do with duplicate materials, what to do with incompatible materials, what to do with textures. After this, you can click "convert to.." to start the conversion.

When converting to standard material, some data will get lost as the material does not support all options!

When you're done with the conversion, you can close the script. You can open the listener window to see the conversion time and any messages generated by the script.

To convert to or from V-Ray or Corona, you will need to have either of those renderengines installed. At least as demo version.
Please make sure you are subscribed to our newsletter, as this is our main line of communication and we will use it to announce any updates!

The support for the GTA3 material will only work if you have the material available in 3dsMax.

Overview of things the script will/can do:

- Convert the whole scene
- Convert the current selection
- Convert to and from Arch&Design
- Convert to and from VrayMtl
- Convert to and from Standard material
- Convert Gamma&Gain map
- Convert Multi/Sub-Map
- Convert VrayColor map
- Convert VrayHDRI map
- Convert VrayMultiSubTex map
- Convert VrayNormalMap
- Convert VraySky
- Convert Autodesk Generic
- Convert Autodesk Ceramic
- Convert Autodesk Concrete
- Convert Autodesk Glazing
- Convert Autodesk Hardwood
- Convert Autodesk Masonry CMU
- Convert Autodesk Metal
- Convert Autodesk Metallic Paint
- Convert Autodesk Mirror
- Convert Autodesk Plastic/Vinyl
- Convert Autodesk Solid Glass
- Convert Autodesk Stone
- Convert Autodesk Wall Paint
- Convert Autodesk Water
- Convert Multi/Sub-Object
- Convert Blend
- Convert VrayBlend
- Convert Vray2Sided
- Convert VrayLightMtl
- Convert VrayWrapper
- Convert to and from VrayLightMtl
- Convert to VrayCarpaintMtl
- Convert Autodesk Bitmap
- Convert Autodesk Mix
- Convert Autodesk Tile
- Convert Autodesk Noise
- Convert Autodesk Speckle
- Convert Ambient Occlusion map/VRayDirt map between Mentalray, V-Ray and Corona
- Convert Mapping coordinates to correct settings based on current system units where needed
- Replace duplicate materials with instances of the same material (based on material name only!)
- fix Autodesk Metal cut-out settings. Changing the settings in the Autodesk Metal material won't change the result. However, setting the material parameters to the correct settings and then converting it, will result in the correct cut-out.
- Some Autodesk materials aren't as realistic as they can be, after conversion this is enhanced when possible
- There is a bug in the Autodesk Metal material so it won't support cutout correctly, the script will fix this
- Procedural maps will be converted to bitmaps when converting to Standard materials. This will allow procedural maps to be taken with you to VR engines like Unity and Unreal.

- When converting to standard materials, you will have the option to choose the resolution in which the procedurals should be rendered. Default is 512, maximum is 4096 pixels. All rendered procedurals als square bitmaps (.png) with gamma correction.
- When converting to standard materials, you will have to choose a map to which all rendered procedurals will be saved. Also every bitmap in the scene will be saved (copied) to this location. This way, when going to for instance Unity, you won't have to collect your scene maps, but you can save/render them to your unity-project asset folder.
- When converting to standard materials, you will have to option to rename duplicate maps. Every rendered procedural or copied bitmap will be placed in the same folder. If a file already exists and renaming is off, copying/rendering will be skipped!!

Things the script doesn't do:

- Autodesk Metallic Paint won't convert to Arch&Design with carpaint shader, or MR Carpaint material. Neither will it convert to a VrayMaterial. (yet)
- change any objects
- change any material in the material editor, the script works only on objects and shapes with a material
- reflective materials won't be reflective when converted to Standard, no raytraced options are used.
- Duplicate bitmaps will not be compared (yet). Only the first rendered or copied file will stay. Duplicates will be skipped (with renaming off)
- Not every bug or error that perhaps can occur will have a correct error handling

Universal Material Converter – schematic