DDS Texture Export

Overview

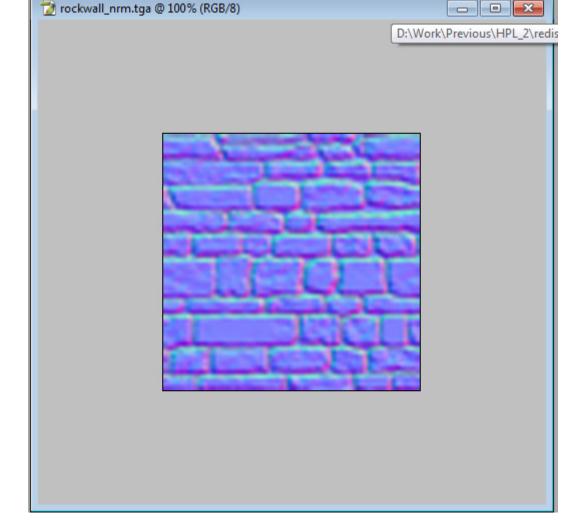
This tutorial will go through how to export a normalmap in the 3Dc format using the NVidia Texture Tools.

The pretty much the same pattern can be used to export a diffuse, specular, etc texture, but normal map has some extra stuff so using this in this tutorial.

Steps

1) You texture

Here is the texture that we want to export as a DDS.



2) Save as DSS

Choose DDS as the format you want to save in.

		—X —
in: 🌗 rockbox	- 🗿 🏚 📂 🖽 -	
s Svn		
File name:	rockwall_nm.dds	Save
Format:	D3D/DDS (*.DDS)	Cancel
Save Options Save:	As a Copy Annotations Alpha Channels Spot Colors Layers U	se DDS
Color:	Use Proof Setup: Working CMYK ICC Profile: sRGB IEC61966-2.1	
Thumbnail	Use Lower Case Extension	
	s svn	s Svn Save Options Save: As a Copy As a Copy As a Copy Color: Use Proof Setup: Working CMYK ICC Profile: sRGB IEC61966-2.1

3) The Save dialog

Choose the format at the upper left of the dialog. Here we will choose 3Dc, which is the normalmap format the engine uses. For a color texture this would be DXT1 or DXT5.

Always make sure to generate the mipmaps when saving and make sure to have it set to "All".

	NVIDIA dds Format v8.23		
The Format	3Dc XY 8 bpp Normal Map	Save Cancel	
	2D Texture MIP Map Filtering Sharpening Image Options Normal Map Settings	MIP Map Generation Generate MIP maps C Use Existing MIP maps C No MIP maps	Always generate mipmaps!
	Fading MIP maps Write Config Read Config	2D Preview 3D Preview Refresh Preview Preview Options	
	📀 nvidia.	Profiles Set Profile Directory Save Profile .	
	Comments to SDKFeedback@nvidia.com	Load Profile Ano profile loaded>	

4) Mip map filers

The default box filter often gives subpar quality and the mipmaps, so good to choose something else to use for all images. "Catrom" is used here but there are others that work fine too. If the image has a lot of finer details it is worth to try a bit if it looks strange in-game.

MIP Map Generation Filtering Settings				
Catrom Filter Type				
Gamma Correct 2.2 Gamma Value				
Blur factor: >1 is blurry, <1 is sharp				
Override Filter's Default Width				
10 Filter Width Override Value				
🗖 Alpha Modulate				
ОК				

5) Normalmap settings

This is specific for normal maps. Simply make sure that all boxes are unchecked.

	mal Map		×			
Normal Map Conversion						
	Height Generatio					
	Filter Type	C 4 sample	C Alpha Channel			
	🗖 Wrap	○ 3×3 ● 5×5	Average RGB			
	🔲 Invert X	○ 7 x 7	Alternate Conversions			
	🔲 Invert Y	○ 9×9	C Biased RGB			
		⊂ dUdV	C Red			
	MinZ 0	0-255	C Green			
	Scale Loo		C Blue			
	Scale 20		🔿 Max (R,G,B)			
	Alpha Field		C Colorspace			
	O Unchange	d	C Normalize only			
	Height					
	O Set to 0.0					
	O Set to 1.0					
[Normaliize]	ОК			

6) Check in the modelviewer

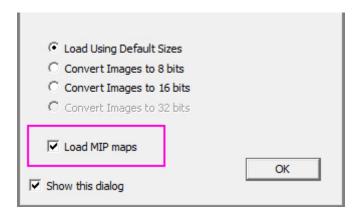
Once saved and exported, check so everything looks okay in the modelviewer. Having "keylight on camera checked" makes it easier to see the normals and turning of shadows can remove some jitter that the shadowing algorithm might produce.

Also make sure to turn off all texture except specular and normalmap to makes sure the normalmap looks okay.

AvgFrame: 6.622525 FPS: 150.999817 Avg: 6.644869		ModelView Toolba	r		
Texture memory usage: 2213 kb / 2.2 Mb Num of sounds: 0	Everything except normalmap and spec turned off	Background:	Black	•	
Will of Soulids. O	to make it easier to check.	Model			
		Rotate	Show AABB		
		Material Textures:		- I	
		Diffuse	 NMap 		
		Specular	Alpha		
		Height	Illumination		
	and the second	Cubemap	DissoiveAipi		
	The state of the s	CubeMapAlpha	DetailDiffus		
		Detaininap	Tansiucenc	9	
		Animation			
		Show Skeleton	Add anim		
		Current Animation:		_	
and the second second				-	
		Stop Pa	use Play		
		Physics			
		 Active 	Draw Debug		
		Accuracy: High		-	
		Body:		-	
		Mat: Defau	lt	▼ ▼	
		Mass: 0		Ξ	
	The main light is on the camera,	Keylight on Came	era		
	The main light is on the camera, Makes it easier to see normal map	Ambient lighting			
		SSAO			
		Bloom			
		ToneMapping			
		Amb Amc 🖌		Þ	
		Light:	Кеу	-	
Havin	ng no shadows can make the image cleaner	Visible	Shadows		
TIAVII					-

7) Loading normal map

This step and the next one is not really needed but might be good just to see it is generated properly! First, when loading the texture make sure that you load the mipmaps aswell!



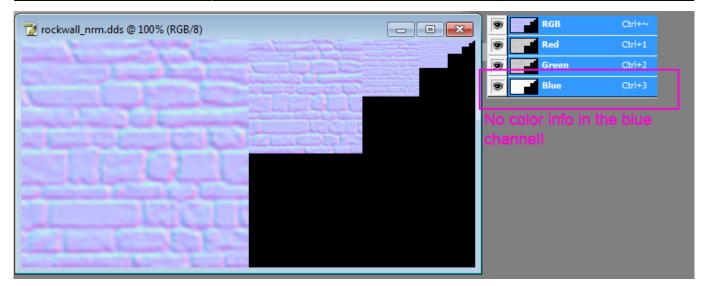
8) The loaded image

DO NOT SAVE THIS IMAGE!

Especially for normalmaps, the image you just loaded cannot be save.

You can see in the image that all mipmaps have been generated and you can also see that the Blue channel contains (almost) no information (what is there is due to the compression technique used)!

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Cubemap Export

Overview

This tutorial will go through downscaling and exporting of cubemaps to make sure that borders stay correct.

Steps

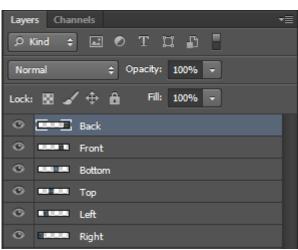
1) Your texture

Place each of the cubemap sides on its own layer and place them after each other in a row. The image width should be 6 times larger then the height. The sides should be placed in the following order: Right, Left, Top, Bottom, Front, Back



2) Downscale the image

If your image is to large in size it is a good idea to downscale it. Place each side on its own layer.



Select Image > Image Size...

Image Size					×
Pixel Dimen	sions: 288,0K	(was 1,13M)			ОК
<u>W</u> idth:	50	Percent 👻	ີເ		Reset
<u>H</u> eight:	50	Percent 👻	_\°		<u>A</u> uto
Document	Size:)nlv do	wnscale	by 50%, 25% etc
Wi <u>d</u> th:	27,09	Centimeters		3	,,
Hei <u>a</u> ht:	4,52	Centimeters	•	"	
<u>R</u> esolution:	72	Pixels/Inch	•	•	
Scale Styles	;	Make su	ure bilin	near is se	lected, otherwise
Constrain Proportions edges will bleed over					
Resample <u>I</u> r	nage:				
	Bilinear			•	

3) Save the image

Select "Cube Map" as the image type and then follow the steps in the DDS Texture Export tutorial

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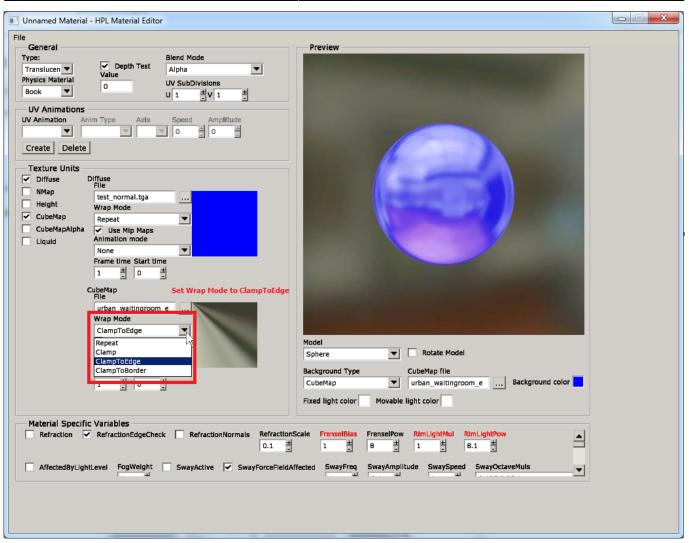
hpl3:tutorials:texture_dds_export https://wiki.frictionalgames.com/hpl3/tutorials/texture_dds_export

NVIDIA dds Format (v8.54.0625.1800)	×
DXT1 RGB 4 bpp no alpha	▼ Save Cancel
Cube Map 👻	MIP Map Generation © Generate MIP maps
MIP Map Filtering Sharpening	 Use Existing MIP maps No MIP maps
Image Options Normal Map Settings Sel Fading MIP maps Write Config	ect Cube Map
Read Config	2D Preview 3D Preview Refresh Preview Preview Options
Save Flipped Vertically	Profiles
NVIDIA.	Set Profile Directory Save Profile
	Load Profile
Comments to SDKFeedback@nvidia.com	<no loaded="" profile=""></no>

3) Set correct Wrap Mode

After setting the cube map to a material select ClampToEdge as the Wrap Mode. This will remove all edges.

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