Subject: W3D Benchmark Tests
Posted by SomeRhino on Sat, 05 Apr 2003 19:22:56 GMT

I did a bit of testing with the W3D engine. On the first test, I made quite a few instances of the oak_large included in the Mod Art zip. I set up all the trees, and exported. The file total was about 34K polys. Results:

Alpha Test (on leaves) with phys collision: 57 FPS
Alpha Test, No phys: 61 FPS
Opaque, Phys: 62 FPS
Opaque, No Phys: 61 FPS

These results were quite surprising, since there were 34000 polys on the screen all at once, yet still ran twice as fast as C&C_Field.

For the next test, I used the same thing, except clones all the trees once, doubling the polys to 68000.

Alpha Test, Phys: 44 FPS
Alpha Test, NoPhys: 48 FPS
Opaque, Phys: 46 FPS

It's interesting to note that when I switched from third person view to first person, the FPS increased by about 12%.

If anyone wants to add to these test results, go ahead. I think it's important to know that polygons seem to hardly effect FPS, and I still can't pinpoint what does. Perhaps it's multiple materials on the screen at the same time.

Don't go too crazy with polygons though, because A) It's a bad habit, and B) It seems to crash the engine if the count exceeds 100K.

Subject: W3D Benchmark Tests
Posted by General Havoc on Sat, 05 Apr 2003 19:36:47 GMT

This just shows how much the W3D engine can handle, and it quite a bit more powerful than peeople originally thought. If you have a test map with the trees on then I will do a test on my system to see what results I get. C&C Generals shows how good the W3D engine actually is, i can't think of an existing game engine that would be able to handle Generals. I think you are correct in saying that multiple materials slow down the game engine. In the Generals editing manual it clearly states throughout about alphablending 3 materials will cause big performance hits on the game and suggest against them if possible.

_General Havoc

Subject: W3D Benchmark Tests
Posted by Deafwasp on Sat, 05 Apr 2003 19:42:08 GMT
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what does this mean for online MP games/maps?

Subject: W3D Benchmark Tests
Posted by StoneRook on Sat, 05 Apr 2003 20:07:29 GMT
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it's the materials.....

Subject: W3D Benchmark Tests
Posted by Triforce on Sat, 05 Apr 2003 22:33:25 GMT
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So a map with one texture and material setting would have better FPS than the same map with multiplue textures and material settings? Just trying make sure I got it all

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Subject: Re: W3D Benchmark Tests
Posted by killakanz on Sat, 05 Apr 2003 23:36:40 GMT
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SomeRhinoIt's interesting to note that when I switched from third person view to first person, the FPS increased by about 12%.

Very nice tests man.

This bit is easilly explained. In third person view you have the character model and all it's idle/breathing animations. In first person they're gone, replaced with the much less taxing gun/arm animations.

Subject: W3D Benchmark Tests
Posted by Doitle on Sun, 06 Apr 2003 05:33:17 GMT
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Actually I beleive there's no limit to the polys. On my old computer (A 400Mhz AMD K6-2 with 4 Mb Rage LT Pro Vid card) I was able to display 5 1,040,000 poly Abrams Tanks at 12 FPS (which was the normal amount I got). They had no texture, but I was just stunned. Nodbugger can back me up too as he saw it. I think the Renegade engine is the most incredible engine of any game and it just needs it's greatness to be tapped!

Subject: W3D Benchmark Tests
Posted by Nodbugger on Sun, 06 Apr 2003 05:38:43 GMT
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Its true.

Subject: W3D Benchmark Tests
Posted by Sk8rRIMuk on Sun, 06 Apr 2003 11:21:32 GMT
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If somebody had a very high poly map we could run tests on difrent machines and diffrent graphics cards to see if the theory of " the amount of polys don't effect the game" is true...

I wonder what it is that cause lag then ...

I layed a mod map that was very big and must of had high polys and I only recied lag when I drove above a underground town where sirens were going of...

I can't remember the name of the map though.

-Sk8rRIMuk

Subject: W3D Benchmark Tests
Posted by General Havoc on Sun, 06 Apr 2003 11:57:39 GMT
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To do a polygon test it should really be an untextured map so the materials don add to any lag caused.

_General Havoc

Subject: W3D Benchmark Tests
Posted by SomeRhino on Sun, 06 Apr 2003 15:57:36 GMT
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I tried to make a test map that used 120,000 polys, and Level Edit crashed everytime I tried loading it.

Subject: W3D Benchmark Tests
Posted by Sk8rRIMuk on Sun, 06 Apr 2003 16:06:20 GMT
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SomeRhinoI tried to make a test map that used 120,000 polys, and Level Edit crashed everytime I tried loading it.

LMAO...

So now we can't prove the engines good because we can't make the source material   .

-Sk8rRIMuk

Subject: W3D Benchmark Tests
Posted by laeubi on Sun, 06 Apr 2003 16:51:42 GMT
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If you wanna tex, I'l lrelase a map tomorrow.

How mayn Polygons do you prefer?

Subject: W3D Benchmark Tests
Posted by Madtone on Mon, 07 Apr 2003 06:48:32 GMT
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hmmm, maybe it would be a good idea to try high polygon vehicles. so then you wouldn't have the trouble with Level Edit crashing.

then in game just buy a few of these high polygon vehicles and then a few guys drive around and then put all their test results on one page??

i have quite a few high polygon vehicles you could have?

--OR--

add the script that add something on startup, example:

like on startup create this huge high polygonal building and stuff.

then you should overcome the problem with level editor!!\

Hope this helps

Subject: W3D Benchmark Tests
Posted by laeubi on Mon, 07 Apr 2003 07:24:39 GMT

Or a map with some polygons, + Hig poly vehicles.
Can you send the vehicles to me? I'll the create a map with them.

Subject: W3D Benchmark Tests
Posted by Halo38 on Mon, 07 Apr 2003 15:01:52 GMT

SomeRhinoI tried to make a test map that used 120,000 polys, and Level Edit crashed everytime I tried loading it.

80,000 polys level edit crashed for me

I want your computer!

Subject: W3D Benchmark Tests
Posted by Sparxxx on Mon, 07 Apr 2003 15:16:10 GMT

Over 250 000 than crash
under nothing happens

And i have an p3 666 mhz
so it could not be the computer

Subject: W3D Benchmark Tests
Posted by Madtone on Mon, 07 Apr 2003 22:16:21 GMT

LaeubiOr a map with some polygons, + Hig poly vehicles.
Can you send the vehicles to me? I'll the create a map with them.

ok, well some of the models on ModX i uploaded are high polygonal, (im too lazy to budget my self on polys) so just use some of those,

im also going to upload more models today.

Subject: W3D Benchmark Tests
Posted by laeubi on Tue, 08 Apr 2003 06:07:13 GMT

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ok, and I'll start the map today.

Subject: W3D Benchmark Tests
Posted by laeubi on Tue, 08 Apr 2003 21:19:33 GMT
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Here is the map for you to test.

< Download > (891 KB)

[list]
1 Terain (12k) - 12.000
22 Objects (5k) - 110.000
14 Objects (7k) - 98.000
5 Objects (10k) - 50.000
----
42 Objects with - 270.000 Polygons
[/list:u]

Test the Map and post your perofrmance, your CPU/GPU/Ram

MY PERFORMANCE:
CPU: P4 - 1,7 Ghz
GPU: Radeon 7500 64 MB
RAM: 512 Rambus
FPS: 40 - 70

Subject: W3D Benchmark Tests
Posted by General Havoc on Tue, 08 Apr 2003 21:50:27 GMT
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MY PERFORMANCE

1280x1024 @ 32 bit, Full Detail, Fullscreen

CPU: AMD Althlon XP 2000+
GPU: GeForce 4 Ti 4200 128 MB
RAM: 256MB PC2100 DDR SDRAM
FPS: 59 - 61

NOTES
GeForce 4 Ti is overclocked to 305Mhz GPU / 650 Mhz Memory Clock

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FPS limited to 60 due to Refresh Rate of Monitor

Subject: W3D Benchmark Tests
Posted by Nodbugger on Tue, 08 Apr 2003 23:53:19 GMT
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1280x1024 32bit Max Detail

Amd Athlon XP 2200+
512mb ddr pc2700 ram
Geforce 4 Ti4600

FPS=74-76

When it went down to 74 was the split second i turned to 3rd person veiw then immediatly went back up to 75-76.

Subject: W3D Benchmark Tests
Posted by Sk8rRIMuk on Wed, 09 Apr 2003 00:53:22 GMT
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Just got new PC had not got time to instal all my stuff so ran on old one:

MY PERFORMANCE

1280x1024 @ 32 bit, Full Detail, Fullscreen

CPU: Intel Pentium III 666 mHz
GPU: Nvisia TNT Pro II
RAM: 128mb
FPS: 32 - 38 (usual)

May test on my new machine when its set up.

-Sk8rRIMuk

Subject: W3D Benchmark Tests
Posted by Madtone on Wed, 09 Apr 2003 01:11:28 GMT
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so this proves that we can use more polygons i our maps than we first thought?????

Have you guys tried High polygonal vehicles yet? like maybe there might be a problem with high polygonal vehicles because all those polygons moving at once??

there is only one way to find out!!!

also you can use my latest model im building, its a high polygon model because thats what i have started doing now....

I have been working on this for about 2 days, once its done i will upload the whole model to ModX for anyone to use....

I call it the "Orca MkII Prototype"

heres the link to the render:

http://modx.renevo.com/showthread.php?s=&threadid=196

Subject: W3D Benchmark Tests
Posted by Doitle on Wed, 09 Apr 2003 01:26:00 GMT
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Does no one listen? 1 million poly Abrams Tank = works on World's Crappiest computer. Tada!

Subject: W3D Benchmark Tests
Posted by Titan1x77 on Wed, 09 Apr 2003 01:54:11 GMT
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now that we now it's about textures we should test multi-textured objects with low polygons....is it better if we compress to .dds on export?

Subject: W3D Benchmark Tests
Posted by Madtone on Wed, 09 Apr 2003 02:08:01 GMT
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hmm, well i was thinking that....

maybe more people should start to learn UVW Unwrap, because if its the amount of textures, then UVW Unwrap is the best due to it being 1 texture that has lots of other textures in it.

it would make it harder for the modder/mapper but it would create less lag and higher FPS theoreticaly.

i could be wrong......

Subject: W3D Benchmark Tests
Posted by SomeRhino on Wed, 09 Apr 2003 12:39:03 GMT
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I don't think it's the texture mapping, it's the amount of materials. Each new material makes it slower. Really though, nothing can be done to change that, since most of the materials are buffered around base areas. Just don't use lots of materials near bases perhaps. I also think WWSkin objects slow it down though.

Subject: W3D Benchmark Tests
Posted by Madtone on Wed, 09 Apr 2003 23:30:50 GMT
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bah, this just makes it more complicated

im stumped..

Subject: W3D Benchmark Tests
Posted by SomeRhino on Thu, 10 Apr 2003 02:24:37 GMT
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After more testing, it seems that polygons with standard UVW coordinates for texture mapping take about twice as much power as unmapped polygons. Viewed a 10K poly map I'm making in W3D Viewer, and without mapping, the clock rate hovered around 500, and with mapping, 1000.

Subject: W3D Benchmark Tests
Posted by Titan1x77 on Thu, 10 Apr 2003 03:24:49 GMT
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now what if it was a solid colored material compared to a multi colered material?

Subject: W3D Benchmark Tests
Posted by Dante on Thu, 10 Apr 2003 06:18:38 GMT
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Titan1x77now what if it was a solid colored material compared to a multi colered material?

should be 0 difference... as it still has to load it, unless the file is like 900k vs 10k

Subject: W3D Benchmark Tests

Posted by Halo38 on Thu, 10 Apr 2003 12:45:32 GMT

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SparxxxOver 250 000 than crash
under nothing happens

And i have an p3 666 mhz
so it could not be the computer

yup my bad