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Subject: Multiple worldboxes

Posted by [Veyrdite](#) on Fri, 27 Feb 2009 12:37:14 GMT

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Is it possible? This would allow vtol aircraft to have a box for their wings and body instead of one big one that covers several cubic meters of air around them.

Seeing as blue-hell will be supposedly fixed by TT, then balls/round objects could be made crudely using a few boxes.

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Subject: Re: Multiple worldboxes

Posted by [mrÄÄÄ-z](#) on Fri, 27 Feb 2009 14:02:08 GMT

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You could try it with name "Worldbox.00" or "Worldbox.01" and then link it how it should be

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Subject: Re: Multiple worldboxes

Posted by [ErroR](#) on Fri, 27 Feb 2009 14:53:35 GMT

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madrackz wrote on Fri, 27 February 2009 16:02 You could try it with name "Worldbox.00" or "Worldbox.01" and then link it how it should be

But i think that if you do so then ren would think it's a LOD

P.S: do world boxes have to be well.. boxes? can it be reshaped?

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Subject: Re: Multiple worldboxes

Posted by [Genesis2001](#) on Fri, 27 Feb 2009 15:17:45 GMT

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afaik, AR uses multiple world boxes for some of their units. Not sure which, but I've heard they're using more than one world box. (I believe they call it "fake world box" lol)

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Subject: Re: Multiple worldboxes

Posted by [Reaver11](#) on Fri, 27 Feb 2009 15:21:55 GMT

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No not necessarily. The old gdi beta harvester has a copy of the whole unit but then just a bit bigger and is called worldbox.

It does have to be one mesh if I am correct.

Only thing is I believe it is way more glitchy than the simpel box. Since calculating two boxes that colide is way faster and easier than two complex shape colliding.

That harvester works ingame I have never tested it any further on any other unit. The thing is why do you want a complex worldbox for ren since most units are already boxes themselves

(That harvester is in the renassets or the one of the command mod)

Edit: @ zack hmm never knew that lol

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Subject: Re: Multiple worldboxes

Posted by [Jerad2142](#) on Fri, 27 Feb 2009 15:40:42 GMT

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Reaver11 wrote on Fri, 27 February 2009 08:21ErroR wrote on Fri, 27 February 2009 08:53madrackz wrote on Fri, 27 February 2009 16:02You could try it with name "Worldbox.00" or "Worldbox.01" and then link it how it should be  
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Edit: @ zack hmm never knew that lol

From my testing (way in the past, it might have been 2 or 3 years ago now) it will reshape the world box as a square in game, the worldbox's sides will meet the furthest spot that the original mesh shape extended on the + and - XYZ axes. Never tried multiple worldboxes though, you should try as it would be interesting to find out if it works, and if it does, I have to go back and redo some work on some of my mods. >.>

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Subject: Re: Multiple worldboxes  
Posted by [rrutk](#) on Fri, 27 Feb 2009 16:07:04 GMT  
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I made worldboxes with the exact shape of vehicles, kirov e.g.

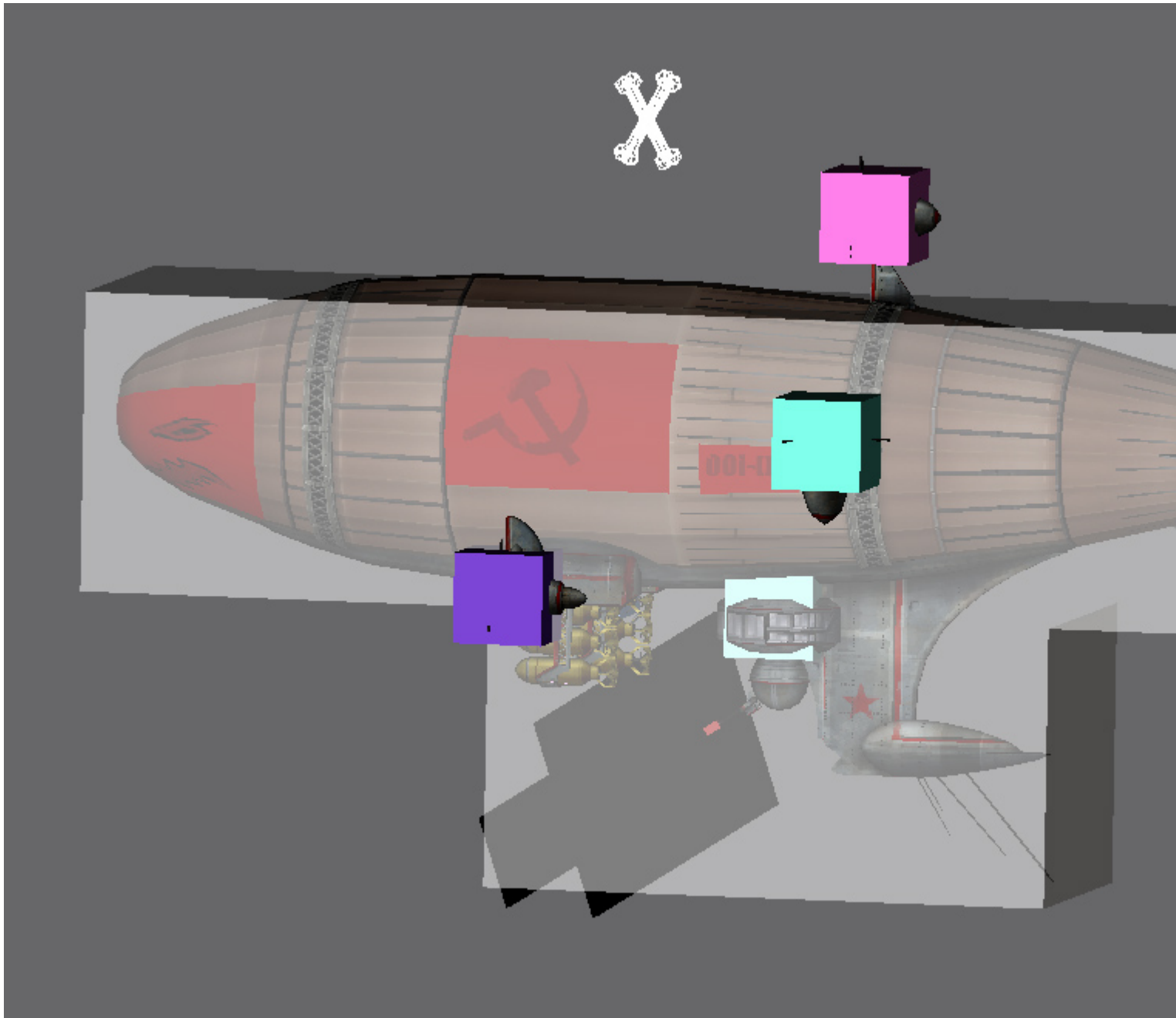
Renegade doesnt accept the shape of worldboxes, they are handled like one big cube. dont know why...

It's ONE (1) box:

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### File Attachments

1) [wb.jpg](#), downloaded 941 times



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Subject: Re: Multiple worldboxes  
Posted by [Gen\\_Blacky](#) on Fri, 27 Feb 2009 17:55:22 GMT  
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It would be awesome if you could make one world box the shape of the vehicle.

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Subject: Re: Multiple worldboxes  
Posted by [saberhawk](#) on Fri, 27 Feb 2009 18:00:34 GMT

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There's a reason it's called the worldbox, and not worldboxes and/or worldconvexhull; Renegade's dynamic physics work off of the boxes.

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**Subject: Re: Multiple worldboxes**  
Posted by [Veyrdite](#) on Fri, 27 Feb 2009 22:58:29 GMT  
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Jerad is right about the mesh to worldbox conversion - it takes the furthest vertices on all planes (x y z and -x -y -z) to make the sides of the worldbox.

The fact Renegade uses boxes is to simplify collisions. Image blue hell every-time you drove into a wall due to the fact every polygon in your vehicle collides.

Different-shaped worldboxes would be difficult without the source-code, but the ability to have multiple world-boxes should be easier and do just as nearly as much.

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**Subject: Re: Multiple worldboxes**  
Posted by [saberhawk](#) on Sat, 28 Feb 2009 03:43:00 GMT  
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Dthdealer wrote on Fri, 27 February 2009 17:58Jerad is right about the mesh to worldbox conversion - it takes the furthest vertices on all planes (x y z and -x -y -z) to make the sides of the worldbox.

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Should be, but in all honesty support for multiple world boxes is just as "easy" as support for convex hulls.

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**Subject: Re: Multiple worldboxes**  
Posted by [Veyrdite](#) on Sat, 28 Feb 2009 05:14:12 GMT  
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Saberhawk wrote on Sat, 28 February 2009 14:43Dthdealer wrote on Fri, 27 February 2009 17:58Jerad is right about the mesh to worldbox conversion - it takes the furthest vertices on all planes (x y z and -x -y -z) to make the sides of the worldbox.

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The ability to check if or re-create meshes convex would cause many bugs especially if vertices are not attached or some other minor problem exists.

I Think the real problem would be making the W3d engine calculate collision for more than one face per colliding face, as it probably only calculates collision for one world-poly to one world-box side.

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Subject: Re: Multiple worldboxes

Posted by [saberhawk](#) on Sat, 28 Feb 2009 06:16:15 GMT

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Dthdealer wrote on Sat, 28 February 2009 00:14Saberhawk wrote on Sat, 28 February 2009 14:43Dthdealer wrote on Fri, 27 February 2009 17:58Jerad is right about the mesh to worldbox conversion - it takes the furthest vertices on all planes (x y z and -x -y -z) to make the sides of the worldbox.

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I Think the real problem would be making the W3d engine calculate collision for more than one face per colliding face, as it probably only calculates collision for one world-poly to one world-box side.

Not really, convex hull calculation takes a "vertex soup" and calculates the convex hull for that group of vertices. Small mesh problems can easily be automatically found and handled...

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Subject: Re: Multiple worldboxes

Posted by [Ghostshaw](#) on Sat, 28 Feb 2009 10:57:49 GMT

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I think multiple worldboxes would actually be harder as it would require treating one object as

multiple (unless you treat the whole thing as convex anyhow).

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Subject: Re: Multiple worldboxes

Posted by [Veyrdite](#) on Mon, 02 Mar 2009 10:14:46 GMT

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But you would have to use multiple world-boxes anyway as renegade uses boxes for collision.

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Subject: Re: Multiple worldboxes

Posted by [Ghostshaw](#) on Mon, 02 Mar 2009 10:25:15 GMT

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Not if we switch to convex shapes for collisions, which is probably easier then attaching multiple worldboxes to one model.

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Subject: Re: Multiple worldboxes

Posted by [rrutk](#) on Mon, 02 Mar 2009 13:55:17 GMT

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but attention, gameplay change. it will become more difficult to squeeze someone, e.g. with a heli.

but i would like convexhulls.

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Subject: Re: Multiple worldboxes

Posted by [Omar007](#) on Mon, 02 Mar 2009 14:23:11 GMT

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I would really like Convex Hull. That would make it even more realistic

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Subject: Re: Multiple worldboxes

Posted by [EvilWhiteDragon](#) on Mon, 02 Mar 2009 14:32:37 GMT

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rrutk wrote on Mon, 02 March 2009 14:55but attention, gameplay change. it will become more difficult to squeeze someone, e.g. with a heli.

but i would like convexhulls.

Then again, you would also be able to fly lower, and the sidepods would also be able to hit the person.

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Subject: Re: Multiple worldboxes

Posted by [Genesis2001](#) on Mon, 02 Mar 2009 19:56:03 GMT

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EvilWhiteDragon wrote on Mon, 02 March 2009 07:32rrutk wrote on Mon, 02 March 2009 14:55but attention, gameplay change. it will become more difficult to squeeze someone, e.g. with a heli.

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It'd be cool if you could shred their body with the rooters or whatever you call them

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Subject: Re: Multiple worldboxes

Posted by [saberhawk](#) on Mon, 02 Mar 2009 21:36:16 GMT

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Zack wrote on Mon, 02 March 2009 14:56EvilWhiteDragon wrote on Mon, 02 March 2009 07:32rrutk wrote on Mon, 02 March 2009 14:55but attention, gameplay change. it will become more difficult to squeeze someone, e.g. with a heli.

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Rotors

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Subject: Re: Multiple worldboxes

Posted by [Veyrdite](#) on Tue, 03 Mar 2009 04:42:23 GMT

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This would just be an added feature, and would not be enforced on the existing renegade-model world-boxes as theirs are normal boxes.

The aim of this is to allow modders better control of object collision, namely for aircraft.

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