Subject: How does the obilisk choose its targets?
Posted by reborn on Mon, 27 Oct 2008 17:50:48 GMT
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Does anyone know how the obilisk chooses its targets? Is it simply any random GameObject * that isn't it's own team and within range, or does it have a priority? Is there any intelligence in decision making, or is it random?

Just curious...

Subject: Re: How does the obilisk choose its targets?
Posted by StealthEye on Mon, 27 Oct 2008 18:04:11 GMT
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Basically it fires at the object that came in sight first. If that object goes out of sight it will target at the one it finds first. This is probably the oldest object (which has the lowest id), but it may be quite random as well, not sure about that. So in general you can only predict that it targets at the first object in sight.

Note that it checks in 0.5 second delays, so sometimes it will not detect that an object goes out of sight (thus keep the same target) or it will "see" two objects going in sight at the same time. In that case it will be virtually random again, see above.

So basically it doesn't have intelligence in target prediction.

So every 0.5 seconds:
- If the previously targeted object is still visible, keep targeting it.
- Otherwise, target the first visible object found. (order for finding objects is not defined).

Well, I just explained it three times, but I still feel it's not very clear. If you got any followup questions, ask.

Subject: Re: How does the obilisk choose its targets?
Posted by bisen11 on Mon, 27 Oct 2008 21:15:11 GMT
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In my experience it's always targeted infintry before vehicles. Which is bad for nod but if you're gdi you can sort of take one for the team.

Subject: Re: How does the obilisk choose its targets?
Posted by mrÃ£Ã§Ä·z on Mon, 27 Oct 2008 21:31:08 GMT
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I noticed the Obelisk always shots the last Unit,

like: on a rush the obelisk will shot at the last vehicle, not the fist vehicle

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Subject: Re: How does the obilisk choose its targets?
Posted by IronWarrior on Mon, 27 Oct 2008 21:54:21 GMT
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I think it's mostly first come first served.

Since we all done the old tactic of being a decoy for the OBI to allow a other player to rush forward and sneak in somewhere or plant a beacon while the OBI is busy flying the first guy.

Subject: Re: How does the obilisk choose its targets?
Posted by cnc95fan on Mon, 27 Oct 2008 21:56:33 GMT
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bisen11 wrote on Mon, 27 October 2008 14:15In my experience it's always targeted infintry before vehicles. Which is bad for nod but if you're gdi you can sort of take one for the team.
A friendly-fireing obby?

Subject: Re: How does the obilisk choose its targets?
Posted by Goztow on Tue, 28 Oct 2008 07:48:18 GMT
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I also noticed that the oby always shoots the last thing that came in its sight, except for the oby on the BI and TK2 servers which shoots the first thing that comes in sight, which seems the most logical thing to do. It's very obvious when you're trying to walk in Ref on Field with two hotties: one gets killed, one makes it in. usually the one at the back gets killed but on BI and TK2 serevrs, the one on front gets killed.

So seye, u must have played with it at some moment .

Subject: Re: How does the obilisk choose its targets?
Posted by GrimmNL on Tue, 28 Oct 2008 12:15:11 GMT
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i just know it always shoots at ME

Subject: Re: How does the obilisk choose its targets?
Posted by ErroR on Tue, 28 Oct 2008 12:30:09 GMT

I noticed if someone (a vehicle for example) draws ob's attention to it so inf can run out of tuns into a building (etc) it shoots vech but when inf comes out it shoots inf (and the splash mostly kills multiple ppl)

Subject: Re: How does the obilisk choose its targets?
Posted by reborn on Tue, 28 Oct 2008 19:46:50 GMT

StealthEye wrote on Mon, 27 October 2008 13:04Basically it fires at the object that came in sight first. If that object goes out of sight it will target at the one it finds first. This is probably the oldest object (which has the lowest id), but it may be quite random as well, not sure about that. So in general you can only predict that it targets at the first object in sight.

Note that it checks in 0.5 second delays, so sometimes it will not detect that an object goes out of sight (thus keep the same target) or it will "see" two objects going in sight at the same time. In that case it will be virtually random again, see above.

So basically it doesn't have intelligence in target prediction.

So every 0.5 seconds:
- If the previously targeted object is still visible, keep targeting it.
- Otherwise, target the first visible object found. (order for finding objects is not defined).

Well, I just explained it three times, but I still feel it's not very clear. If you got any followup questions, ask.

It that through reverse engineering, or educated guess?

I've always though the Obilisk could do with some intelligence when choosing targets, more so then the AGT.

Subject: Re: How does the obilisk choose its targets?
Posted by StealthEye on Tue, 28 Oct 2008 20:14:57 GMT

I cloned the original obelisk script to fix the "obby stays charged" bug. This is how the script works. Since people say it apparently does not shoot the first vehicle, perhaps there was another bug in there that I fixed so that it now does. The .5 second thing is accurate anyway. That's the way AI enemy seen logic works. If it indeed does not fire at the first vehicle on default, I assume it fires at the thing it apparently finds last, in which case I can not predict what it would be. It seems unlikely to me that it would always pick the object latest in view.

I agree that improving the target picking might be nice, but it could influence gameplay quite a bit.

(Shoot the hotty rather than the engi / shoot the vehicle that will die in one shot rather than the one that can survive another / shoot the vehicle furthest away because maybe you can fire another shot at it / etc). Iirc scripts contains a obelisk script clone (M00_Obelisk or M00_Obelisk_Weapon or something?), you should be able to enable its registrant and play around to find some nice algorithm. I'm interested in the results.

Subject: Re: How does the obilisk choose its targets?
Posted by reborn on Tue, 28 Oct 2008 20:35:31 GMT
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Me too, an intelligent base defence could impact games massively. Infact, whilst some players would pick up on this, I fear all it would largely accomplish is thwarted efforts of teamwork. Probably best to leave it alone, but it's interesting all the same.

Subject: Re: How does the obilisk choose its targets?
Posted by w0dka on Tue, 28 Oct 2008 22:43:18 GMT
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pseudoalgorithm:

Obelisc loads on enemy entering line of sight.

On OBELISC_loaded get hpvalue of all units in line of fire && range

sort after min hits.

exclude all units from possible target list that need more hits then the lowest hp one.

sort all units that will die in least possible hits for vehicles, no vehicle found choose infantrypriority list. if vehicle found use vehicle priority list.

vehicle priority list:
Mammoth
Flamer
APC
Stank
Med & Light
Art & MLRS
Buggy & Hmvee

inf. priority list:
Hotwire& tech
Units sorted after cost.

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if there are more wounded mammys or such things ob will always choose that with lowest hp, or if all the same that closest to ob.

/repeat till nothing in line of sight.

just my idea after thinking 5 mins....

in my experience the ob chooses the the last entering'/ farthest away object. Remember a match on field where we mammycharge them. one mammy stayed and shelled the hon while all others charge in and nuke the ob/rest of base. The ob only tried to hit the honmammy. But 'cause of feeled like 6 hotwires he didn't die.

Subject: Re: How does the obilisk choose its targets?
Posted by Genesis2001 on Sun, 02 Nov 2008 05:19:26 GMT
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reborn wrote on Tue, 28 October 2008 13:35Me too, an intelligent base defence could impact games massively. Infact, whilst some players would pick up on this, I fear all it would largely accomplish is thwarted efforts of teamwork. Probably best to leave it alone, but it's interesting all the same.

Didn't I release a base defense script to you for C&C Reborn? :\ lol

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Subject: Re: How does the obilisk choose its targets?
Posted by Veyrdite on Sun, 02 Nov 2008 09:58:47 GMT
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If players' object IDs are the same as their pIDs (which are from 1 onwards) then possibly the reason the obby targets them first is because it scans object IDs upwards.

Subject: Re: How does the obilisk choose its targets?
Posted by Genesis2001 on Sun, 02 Nov 2008 21:20:47 GMT
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I just remembered... My base defense scripts were meant for secondary base defenses

Not primary ones :\ lol

Anyway..My scripts make it so base-defenses come in 4 types. (anti-inf, anti-air, anti-veh, and general defense)

They've got an internal targeting system that determines what to shoot at based upon the priority level the Enemy_Seen event "sees" - it stores one target's ID and if it sees another one (and it's bound to see more than one ...) It goes through a check to determine whether it's a higher priority target.

* Note: These AI Scripts are based upon a conversation with danpaul88 shortly after he showed off his AI through a Video for Apocalypse Rising. (I asked him how I could make my own AI Scripts and he told me how he did it for AR...so, Credits go to AR/dp88, I think)