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Subject: Scripts 4.3 final is now available

Posted by [jonwil](#) on Sun, 26 Feb 2017 10:14:34 GMT

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15 years ago today a games developer out of Las Vegas by the name of Westwood Studios released a little FPS game called Command & Conquer: Renegade with a rather interesting engine called the W3D engine.

25 weeks later a programmer from Australia by the name of Jonathan Wilson (that would be me) released a little piece of code that added a couple of new gameplay scripts to the game. In the last 15 years many members of this community has torn the W3D engine apart, put it back together again in totally new ways and made it do things once thought impossible.

I am sure original Westwood developers like Greg Hjelstrom, Byon Garrabrant, Greg Underwood and others would be amazed and what the engine they created is now capable of. Everything from working naval yards and helipads to a sophisticated anti-cheat mechanism to a version of Asteroids has been added to this engine.

It is fitting that on this historic anniversary that I announce the release of scripts 4.3, the latest release of the custom scripts.dll.

I would like to thank Jerad2142, Daniel Blaney and WhiteDragon for their contributions to 4.3 (If I missed anyone else who contributed to 4.3, sorry)

Full list of changes between Scripts 4.2 Update 4 and Scripts 4.3 RC1:

- \* Fix some issues with the way position and targeting data is sent over the network for some objects.

This change fixes the issues with turrets missing shots clientside especially if they are aiming up towards the edge of the map. It also fixes vehicles that leave the map extents from rubberband glitching. They now sync properly like soldiergameobjs do. This change allows ballistic weapons to now work correctly over the network as well.

- \* Add fixes so that you no longer get a bunch of messages about dead buildings/units in the chat box when you first join the game.

- \* Add support for a per-map cameras.ini file. This is named e.g. C&C\_City\_cameras.ini or whatever for your map. It is to be a copy of the normal cameras.ini with whatever extras you want to add. Like the normal cameras.ini, it is checked by the anti-cheat.

- \* Add a fix so that if you mouse over/target a stealth unit, your target box no longer disappears (people were using it as an "exploit" to find stealthed units which was unfair)

- \* Add stuff to prevent people from spamming radio commands and chat messages. Unlike the way stock renegade did this, this fix is server-side and players cant use hacks to defeat it.

- \* Make it so that the HUD is not affected by Set\_Screen\_Fade\_Color/Set\_Screen\_Fade\_Opacity
- \* Changes to allow the max health and max shield strength to go as high as 10000 (previously the limit was 2000). Note that if there are players not running 4.3, things may not work properly here for objects with max health/max shield strength greater than 2000 due to netcode backwards compatibility issues.

- \* If you put ResumeRotation=true in server.ini, it will store the current position in the rotation into a file called resumerotation.txt and re-load it again when the FDS starts (this is so it can resume the rotation if the FDS crashes or is shut down for some reason)

- \* Improvements to the Stop\_Timer and Stop\_Timer2 engine calls so they wont crash if called from inside a Timer\_Expired function.
- \* Fix so that the killed explosion for soldiers displays properly.
- \* Add new console commands called EVAP/EVAT/EVAA. These work exctly like SNTP/SNDT/SNDA except the sound is played using the "dialog" volume setting in the config rather than the "sound effects" volume.
- \* Fix some issues with the output of Player\_Info that were causing an issue if the player has a negative score.
- \* Add some features to clean up the stored map downloads (Daniel Blaney wrote these and knows more about why they exist, how to use them etc so I will let him explain)
- \* Fix so that the correct building icons will display on the purchase terminals when you access the "secret" vehicles/infantry pages.
- \* The /host command in the in-game chat box will now work correctly on a dedicated server.
- \* Fix it so that you cant use console commands/engine calls that change the time limit/time remaining when the score screen is displayed (before it used to crash when doing that)
- \* Change so that the chat hook, host hook, refill hook, player join hook, load level hook, pre load level hook, think hook, game over hook, radio hook, stock damage hook, TT damage hook, console output hook and player leave hook can be set multiple times and the hooks will all be called (before, if you registered any of these hooks the previously set hook would get overwritten)
- \* Some fixes to make radio commands work properly in LAN again.
- \* Add a field to weapon definitions that lets you override the animation set used for weapons.
- \* Add a field to ammo definitions that lets you override the preset used when a C4 is thrown (the default is "Tossed C4" but you can override it on a per-ammo basis now)
- \* Add a field to ammo definitions that lets you disable the "ammo definitions with a velocity greater than 400 are treated as instant-firing" thing
- \* A fix to various obelisk scripts so they will use a "target" bone if it exists)
- \* Add a new engine call Set\_Background\_Music\_Player\_Offset that is just like Set\_Background\_Music\_Player except it lets you specify the starting position within the audio file to begin playing from.
- \* Add a new engine call Set\_Camera\_Player that lets you change the camera profile a player is currently using (this should only be used when players are inside a vehicle)
- \* A bunch of changes to various scripts Jerad wrote.
- \* Some fixes to allow the SkeletonWidth and SkeletonHeight settings for soldiers in LE to work for all skeletons.
- \* Support for adding additional buildings to the "battle info" dialog box. Use the textures HUD\_C&C\_G\_COMM.TGA, HUD\_C&C\_G\_CONYARD.TGA, HUD\_C&C\_G\_SHRINE.TGA, HUD\_C&C\_N\_COMM.TGA, HUD\_C&C\_N\_CONYARD.TGA and HUD\_C&C\_N\_SHRINE.TGA for the new buildings.
- \* Add a bunch of scripts written by Danial Blaney
- \* New engine calls Stop\_Timer2 and Has\_Timer
- \* Fix a glitch with dp88\_AI\_Turret
- \* New engine call ChangeTeamDeaths
- \* Some fixes to JFW\_Change\_Spawn\_Character and JFW\_Custom\_Create\_Object\_At\_Bone

Full list of changes made in 4.3 RC2:

- \* Fix a memory leak.
- \* Fixes to RA\_Base\_Defense\_Simple and RA\_Base\_Defense\_Powered
- \* Fixes to RA\_Infantry\_Spy

- \* New engine call Create\_2D\_WAV\_Sound\_Team\_Dialog
  - \* Make the various JFW\_Base\_Defence scripts not get distracted by the idle spinning when attacking an enemy.
  - \* Add SoldierGameObj::Get\_Contact\_Surface\_Type that returns the surface type that a soldier is standing on.
  - \* Make dp88 turrets face the default direction on creation.
  - \* Fixes and new scripts from Daniel Blaney
  - \* Fixes and new scripts from Jerad2142
  - \* Fix w3danimations.ini to work with map specific presets correctly.
  - \* New engine call Set\_Definition\_TranslationID\_Player that sets the TranslatedNameID for an object or the IconNameID for a weapon.
  - \* Fix IF\_BACK01 not playing a looping animation
- Make calls to SoldierGameObj::Set\_Max\_Speed work properly over the network.
- \* Add a new TrackingIgnoreTarget flag to Ammo objects.
  - \* Fix Radar on vehicles to use camera rotation rather than targeting position.
  - \* Cleanup Cache button now displays a dialog of how much was cleaned up.
  - \* Update health bar code on stock HUD to be able to display more than 4 digits. Retain that is always uses a minimum of 3 digits at all times like stock.
  - \* Add ability for AI controlled soldiers to use the get\_muzzle override that players use so they point towards the target position.
  - \* New tt.ini keyword OverrideMuzzleDirection that sets the default value for the above muzzle override.
  - \* Add parameter for weapons that allows you to fire with empty ammo if the ammo has a spraybulletcost of 0. This allows for example a helicopter with limited rockets to have unlimited machine gun rounds etc. Also useful for weapons with a bayonet as the alternate fire.
  - \* Add a flag to weapon definitions that controls whether to tilt when reloading the gun or not (defaults to true which is the current behavior)
  - \* Jerad2142 fixed things so that SkeletonHeight and SkeletonWidth work correctly for other skeletons. And created files to make females (s\_b\_human skeleton) and mutants (s\_c\_human skeleton) work correctly with this feature.
  - \* Daniel Blaney created textures to allow the com centre and construction yard to appear on the "team information" dialog box and some fixes to a couple building aggregates (1 for the GDI weapons factory and 1 for the GDI advanced guard tower)

#### Full list of changes made in 4.3 RC3:

- \* A bunch of changes to various scripts Jerad2142 wrote (including new scripts)
- \* Fix an issue with sound culling causing sounds to play at the wrong volume in some cases
- \* Small improvement to the netcode that reduces the size of weapon related packets in some cases.
- \* A bunch of changes to various scripts Daniel Blaney wrote (including new scripts)
- \* Fix a netcode issue with weapons not getting their ammo properly set in some cases
- \* Fix to make sure the HUD weapon chart properly resets when a weapon is removed (sometimes it did not)
- \* Hide muzzle flashes on the back weapon model.
- \* Improvements to soldier netcode to reduce latency issues.
- \* Fix a netcode issue that caused soldiers to aim at the ground in some cases.
- \* Add new engine call Set\_Net\_Update\_Rate\_Player to let servers set the net update rate for clients.

- \* Add a fix to an issue with zoom if you are scoped at the end of the map.
- \* Fix scope staying visible when switching weapons.
- \* Improvements to font code for high-DPI displays.
- \* Fixes to prevent various pieces of the HUD from being cut off or drawing incorrectly in certain cases.
- \* Fix some compiler options for a bunch of scripts projects so they are consistent (and so that optimizations that should have been turned on get turned on)
- \* New engine calls Send\_Player\_Kill\_Message and Send\_Purchase\_Response that are needed for Dragonade (lets Dragonade get rid of some hacks in the code they were using to send these particular netcode objects)
- \* Fix TextFileClass::Read\_Line to work identically to stock renegade
- \* Fixes so soldiers no longer shake when standing in or on objects.

#### Changes made in 4.3 RC4:

- \* Fix a netcode issue with reload tilting.
- \* Some fixes to scripts by Jerad2142.
- \* Some fixes to scripts by Daniel Blaney.
- \* Improve the way certain 3D sounds fade out (those played via Create\_3D\_WAV\_Sound\_At\_Bone)
- \* Move the beacon zone in the GDI barracks on Field to the correct place.
- \* Make the ugly laser blockers on the refinery on Complex invisible. (they still stop projectiles though)

#### Changes made in 4.3 RC5:

- \* Fix to reset all sniper related things in the camera when the map starts. (to prevent some glitches related to being in scope mode when the game ends)
- \* Some fixes to scripts by Jerad2142.
- \* Some fixes to scripts by Daniel Blaney.
- \* New tt.ini keyword ScriptZoneDebug that will make script zones visible in-game (useful for debugging purposes)
- \* Fix an issue with certain global building announcement sounds not playing correctly.
- \* Fix an issue where certain features are passing a 3D sound to one of the 2D sound commands and its not playing properly.
- \* Re-use the existing engine sound when Set\_Model is called on a vehicle.
- \* Run the volume calculation when a sound first plays to fix popping and clicking that can sometimes occur (most notably with weapon sounds)

#### Changes made in 4.3 Final:

- \* Some fixes to scripts by Daniel Blaney.
- \* Some improvements to prevent exploits created by sending certain kinds of network packets with specially crafted bogus data (data that regular code would never send)
- \* Fix some issues with the Ranged\_Variable\_Percent\_Vehicle\_Damage engine call and how it deals with base defenses.
- \* Small netcode improvement for explosions
- \* Code so that buildings will send their team over the network to clients (useful if its changed from the default)

Make sure you update your server with the new anticheat.ini, always3.dat, C&C\_Complex.mix and

C&C\_Field.mix. They have not changed since scripts 4.3 RC4 so if you were already running RC4 or RC5 on the server, you should have the correct files.

Anyone wanting a new Dragonade to go with 4.3 final should talk to WhiteDragon as it is up to him to produce a new build. Do not try and mix dlls (bandtest.dll, things like that) from 4.3 with an older version of Dragonade as it may cause problems.

The new build is available from the TT server (the TT download page itself will be updated when I get the chance. Anyone already running scripts (either 4.2 update 4 or any of the 4.3 RC builds) will automatically be updated to Scripts 4.3 final.

Download <http://www.tiberiantechnologies.org/files/scripts-4.3.exe> if you need a full installer (installing for the first time or reinstalling for some reason).

The server bits are available from <http://www.tiberiantechnologies.org/files/server-4.3.zip>

The tools are available from <http://www.tiberiantechnologies.org/files/tools-4.3.zip>

The source code is available from <http://www.tiberiantechnologies.org/files/source-4.3.zip>

The source changes since 4.3 RC5 are in

<http://www.tiberiantechnologies.org/files/source-diff-4.3.diff>

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Subject: Re: Scripts 4.3 final is now available

Posted by [XD\\_ERROR\\_XD](#) on Sun, 26 Feb 2017 13:35:22 GMT

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jonwil wrote on Sun, 26 February 2017 03:14

\* Some improvements to prevent exploits created by sending certain kinds of network packets with specially crafted bogus data (data that regular code would never send)

Care to explain this one please?

Otherwise, great work and happy 15th birthday to C&C Renegade!

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Subject: Re: Scripts 4.3 final is now available

Posted by [iRANian](#) on Sun, 26 Feb 2017 19:45:07 GMT

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jonwil wrote on Sun, 26 February 2017 03:14

\* Code so that buildings will send their team over the network to clients (useful if its changed from the default)

Nice release.

Does this change mean you can change the team of buildings like Weapons Factory now?

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Subject: Re: Scripts 4.3 final is now available  
Posted by [dblaney1](#) on Sun, 26 Feb 2017 20:44:32 GMT  
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iRANian wrote on Sun, 26 February 2017 12:45jonwil wrote on Sun, 26 February 2017 03:14  
\* Code so that buildings will send their team over the network to clients (useful if its changed from the default)

Nice release.

Does this change mean you can change the team of buildings like Weapons Factory now?

It just changes the team when you aim at it and damage/points related stuff. It will still act as it's original team and show on the HUD as the original team. This change is intended to be used for neutral capturable buildings. The on the server behavior is actually unchanged. Clients now can see the team changes correctly now. Before the clients would still see them as the original team.

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Subject: Re: Scripts 4.3 final is now available  
Posted by [Gen\\_Blacky](#) on Sun, 26 Feb 2017 22:42:27 GMT  
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Very Nice. Thank you Jonathan for your continued development as well as everyone else.  
Defiantly a big difference from what I was doing 10 years ago and what I can do now!!

Happy Birthday Renegade!

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Subject: Re: Scripts 4.3 final is now available  
Posted by [Manuel857](#) on Mon, 27 Feb 2017 00:53:27 GMT  
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Awesome! Thanks for all of the hard work over the years!

Happy Birthday Renegade!

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