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===== 3D Sim Radar & Script Usage Monitor v1.1 =====

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===== OVERVIEW =====

You can now access avatar "Top Scripts" for every avatar in your sim like estate managers can!

The monitor will display the positions of all avatars in your sim in three dimensions and clearly identify those with high script use. Each avatar is represented by an elongated sphere with their name & gender and coloured to indicate their script use. The avatar positions and their script use are updated regularly and the script use threshold levels can be set to suit your sim.

Script use in the monitor is assessed in the same way as "Top Scripts" in an estate manager's region tools, based on actual script time, not the number of scripts or allocated memory. See the LAG section below for more information on sim lag.

The optional scripts ball displays the worst offenders contributing to sim lag and displays their script use. The optional stats ball displays specific sim information, including the last restart of the sim.

You can TP to or send a TP to any avatars in the sim or get further information about them from the avatar menus.

If the monitor is owned by the landowner, it can eject or TP home any avatars on that landowner's land.

Access to the menus is initially limited to the owner only, but the owner can add up to nine other trusted administrators or set admin to group.

===== QUICK START =====

Rez the monitor within your land parcel borders and touch for a menu.

Select START and it will rez a small yellow elliptical prim (avball) to represent each avatar in the sim, together with their names & gender. These will change in colour after 30 seconds to indicate that avatars script usage. (High use = red, Mid use = orange, low use = green).

Select Rez Scripts to rez the scripts ball which will display the top four or five script users including their script use information.

Select Rez Stats to rez the stats ball which will display the sim name, number of avatars in the sim, sim FPS, sim TD & the last sim restart time & date.

Read the full instructions below to get the most from your monitor.

===== INSTRUCTIONS - MENU OPTIONS =====

The following script use information for each avatar is displayed on the scripts ball and when requesting "Top Scripts":

Average Resident: 0.5%, 0.11ms, 100 scripts, 4000 Kb.

where:

Average Resident = Avatar name.

0.5% = percentage of frame time used by this avatar's scripts.

0.11ms - script time used for this avatars scripts.

100 scripts - number of running scripts attached to this avatar.

4000 Kb - memory allocated to the scripts attached to this avatar.

Script time is the average server time used by an avatar's scripts. Like Top Scripts, the time reported is the average script time per frame for the last 30 minutes for all the avatar's scripts. If the avatar has been in the sim for less than 30 minutes, the number reported will be the average time per frame since they entered the region.

Due to this averaging, the script time tends to start high when an avatar arrives in the sim and become lower as the averaging kicks in.

The script information is not shown for an avatar until they have been in the sim for 30 seconds to allow some averaging to occur. During the first 30 seconds avatars will be yellow.

Main Menu

START / STOP - Start or Stop monitoring and displaying avatars in your sim.

Rez Scripts - Rez the scripts ball to display the top script users and their script use information.

Rez Stats - Rez the stats ball to display:

- Sim name.

- number of avatars in the sim.

- sim FPS (Frames per second).

- sim TD (Time Dilation).

- the last sim restart time & date.

Set scripts - Set the level to indicate the lower threshold level of high script use as a % of frame time.

The lower threshold level of mid script use will be half the high script % and low use is below that level.

Default high scripts band is set at over 1% (0.22 ms). 20% to 25% of avatars are likely to be in this band.

Default mid scripts band is set at 0.5% to 1%. 20% to 25% of avatars are likely to be in this band.

Default low scripts band is set at under 0.5%. 50% of avatars are likely to be in this band.

Set size - set the size of the monitor (minimum size is 1m).

Help - Get the instruction notecard. The owner also gets an option to reset the monitor if it's not deeded to a group.

OWNER - Owner only menu (see below).

EXIT Menu - There is a 30 second timeout for the the menus. Exit Menu will shortcut this and clear the menu for other admin.

When the scripts and stats balls are rezzed, these options become available:

Scripts ball - gives a menu of appearance options for the scripts ball. Set the Ball or Text Colour and Ball Alpha.

Stats ball - gives a menu of appearance options for the stats ball. Set the Ball or Text Colour and Ball Alpha.

After the monitor is started, these options become available:

Av Menu - gives a menu list of the avatars in the sim, select an avatar for further information about them.

Top Scripts - gives a full sorted list of the avatars in the sim and their script use information with highest use first.

If more than 4 avatars in the sim, it will also give the total and average script use of all avatars.

Who's Here - gives the names of all avatars in the sim.

OWNER Menu - accessible to owner only & not Group or others on admin list.

Admin - Set Group ON or OFF to allow your group admin access

Add avatars to the Admin list to allow them access to the menus. You can also remove them or get a list of avatars on the Admin list.

Hide My Av - Want to remain incognito? Hide your avball from public display, but you will not be hidden from the menus.

Show My Av - If hidden, your avball will return to public display.

Reset Map - To refresh the sim map

Main Menu - Return to the main menu.

Help & EXIT Menu - as above in Main Menu.

Av Menu (specific avatar)

The menu text will display the avatar name & gender, date born, pay info, height, parcel name, coords, scripts in use info & time in sim (or since START).

Say Av Info - will say the above information in your chat window.

Profile link - displays a link in your chat window, click on it to get the avatar's profile.

Av Menu & Main Menu - Return to av menu or main menu.

EXIT Menu - as above in Main Menu.

Teleporting:

NOTE: If it's not possible to use the taxi, a SLurl will be offered to TP.

TP to av - teleport to the avatar. If object entry is permitted, a taxi will be rezzed in front of you.

Send TP - If object entry is permitted, a taxi will be rezzed for the avatar to TP back to you.

The taxi is a prim seat, that will have the name of the intended avatar displayed above it. Sit on it to TP to the destination.

The following options become available if the monitor is owned by the landowner and the avatar is on the same owner's land:

Eject - Eject the avatar.

TP Home - Teleport the avatar home.

Note that if the land is owned by a group, the monitor needs to be deeded to that group to eject & TP home avatars.

When deeded, the last owner remains as the primary admin and retains owner permissions within the scripts.

If you have the ability to manoeuvre your camera inside the monitor, you can also TP to Ground level (by taxi or SLurl) by touching the sim map texture at the position you wish to TP to, or directly access a specific avatar's menu by touching the relevant avball.

===== LAG in Second Life =====

There are many things that contribute to lag and there are many theories on what has the most effect. Some of which are: avatars, collisions, the number and complexity of objects, the amount and size of textures, the number of scripts, the maximum memory allocated and the amount of server time scripts use to run.

The number of scripts and memory allocated do not tell the whole story. High memory does not always mean a significant amount of script time and in some cases, scripts with less memory allocated will use more script time. We believe that script time, not memory is what will show the actual load a script places on the sim. This is the way that "top scripts" in an estate manager's region tools work, based on script time, not allocated memory.

To allow everyone access to these "top scripts", we created the monitor to assess the script time used by avatars in your sim.

For each avatar you will be able to see the number of scripts in use, the memory allocated to those scripts, and the time used by those scripts in milliseconds. That script time is also expressed as a % of the sim frame time (FPS).

After extensive testing in many sims, our assessment for the average avatar script use is: 0.5%, 0.11ms, 100 scripts, 4000 Kb.

We have observed avatars lagging the sim by using 10 times the script time of the average avatar.

===== TROUBLESHOOTING =====

Q. I think my monitor is broken.

A. Take it back to your inventory and re-rez it. That will reset all the scripts.

Q. Why does the monitor flash?

A. That shows that the monitor is updating correctly.

Q. I don't get the option to Eject or TP Home the avatar in the av menu.

A. These options are only offered if the avatar is on land owned by the owner of the monitor.

If the land is group owned, the monitor needs to be deeded to that group.

Q. Why does it send me a SLurl and not a taxi?

A. The parcel you are attempting to TP to may not allow object entry or may not allow scripts to run.

Q. Why doesn't the SLurl send me where I want to go?

A. You may not be allowed access at that destination.

A. The parcel you are attempting to TP to may have a landing point set.

A. The region may not allow direct teleporting.

If you need any further assistance, IM Crissi Yoshikawa or Avi Savira at Tropical Creations.

Thank you and ALOHA!

===== CREDITS =====

Credit and thanks to Tyche Shepherd and her website <http://www.gridsurvey.com> for access to the SL region map textures

Availability of these textures will cease if Linden Lab discontinue storage of map texture uuids or if access to these textures is discontinued at <http://www.gridsurvey.com>

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