

Racer

REAL DRIVING SIMULATORS

“Real driving” simulators have been all the rage on the consoles over the past few years, but there’s a new contender coming up on the outside. Simon Naish takes the Linux version of the real driving simulator, Racer, for a test drive

There have been many so-called “real driving” simulators over the past few years, the best known of which being the Gran Turismo series on the PSX and PS2. However these games aren’t really all they’re cracked up to be – after all, what good would a flight simulator be if the planes bounced when they hit the ground at 200mph?

Back in 1998, Sierra released Grand Prix Legends (GPL), a driving simulator based upon the 1967 Formula 1 season. 1967 was the last year that the cars didn’t have wings or the associated downforce and the science of race tyre technology was still in its infancy. The result of this was very fast cars on very dangerous tracks with no downforce and hardly any grip. Needless to say the driver’s skill was enormous, the racing extraordinary and frequently lethal. The problem Sierra, and designer Papyrus, faced was that in 1998 no-one had a home computer that even came close to the power needed to do the concept justice.

Nevertheless, GPL was exactly what a few very dedicated petrol heads were looking for, and innumerable Internet leagues formed. What’s more, people started to make new graphics for the cars as machines became powerful enough to run them. New or more historically accurate reworkings of the original tracks were made, as were track conversion utilities. In short, the game prospered and still does,



thanks to a huge Internet community constantly working to improve it.

Enter Racer

That’s all well and good, you may be saying, but nothing on these lines runs on Linux. Nothing except Racer, that is – a Free driving simulator written by Ruud van Gaal. His vision was to create a new GPL-style racer that would also enable people to add their own cars and tracks, whilst modelling the physics of the real machines as closely as possible. Luckily for us, he decided to make it cross-platform from the outset. Although much of the development is progressing quicker on the Windows version (features such as force feedback aren’t handled by Linux yet), the Linux version is definitely keeping up.

The initial Racer download is two files; a data tar.gz and an executable tar.gz. The executable was compiled on ‘Best Linux’ with kernel 2.2.16-24 and XFree86 4.0.1 with the nVidia OpenGL drivers. You can download and compile the source code yourself, get it at <http://www.linuxracer.racesim.net>.

The download also includes a track editor, car modeller and tyre modeller. Unfortunately, these aren’t stable on our test Linux box, though the Windows versions seem fine.

The real beauty of this type of game/simulator and



its community is the wealth of add-ons: so far we've found 26 cars and 21 tracks. As you might expect, these vary hugely in terms of quality, stability and drivability, but that's half the fun of downloading them. Our advice would be to stick to the cars and tracks on the linuxracer Web site to begin with. We especially like the Celicas, which are very fast and look amazing. If these aren't to your taste there are models of new Minis, Ferraris (lots of Ferraris), F1 cars, a Volvo estate, GT cars and rally cars.

All about control

The first thing to get set up is joystick input. Linux will readily cope with a huge array of joysticks/steering wheels or whatever other input device you'd prefer to use. Whether or not they are any good in a driving simulator is a different matter. There are tips for setting up a joystick configuration file if, like me, you want to try something with an inordinate number of buttons. I successfully configured a gamepad using the same buttons as I would use in Gran Turismo in a very short time. If you don't have a joystick or steering wheel the game defaults at start up to mouse control.

The problems inherent in using a gamepad become evident as soon as you try to play. To generate full lock in a real car, you must turn the wheel at least one and a half times in either direction. In a racing car this is often reduced to under half a turn. The brake foot must deliver a sizeable thrust to lock the brakes and the accelerator may be depressed several inches. On a gamepad you can normally achieve full lock in about two centimetres of travel in either direction; maximum breaking may be achieved in the same distance, as can acceleration. All this means the cars can be impossible to drive.

If you were to almost instantly apply full lock in a car travelling at say, 80mph, it won't turn, as you will have exceeded the limit of the tyre's grip. Instead you'll simply skid forwards in a straight line. Breaking and accelerating with a gamepad generally provides equally disastrous results. This is all faithfully modelled in Racer and the results are rarely pretty. Some cars are very forgiving, but other are rendered

undrivable, and it feels like a lot of these would remain pretty undrivable even with a steering wheel. Maybe I'm just being pessimistic, but I'll only know for sure once I buy a force feedback wheel.

Fine tuning

Putting aside my poor choice in controller, you'll find that a lot of what you'll find in Racer is very good indeed. The physics model seems excellent, though the tyres could grip a little more, for us mere mortals. The superior car models also move in a very convincing fashion and drifting is possible after some practice. Of course, a lot seems to depend on your choice of car and track.

Comparisons between the Windows and Linux versions are inevitable, and in this case worthwhile. Under Linux I got consistently higher frame rates, with more graphics options on than in Windows. However importing cars and tracks proved more problematic under Linux. As the track editor wouldn't work I couldn't add track cameras, and all tracks now require at least one.

A lot of the additional cars were designed on Windows, which doesn't have a case sensitive filesystem. As such, it's often necessary to change the case of some of the filenames. Check for QLOG.txt in the car directory. This will list any errors and tell you the name of the files Racer was looking for but couldn't find.

It's also well worth fiddling with the audio.ini file. I didn't realise that the sounds were playing incorrectly until I tried the program under Windows, whereupon it became clear that the horrible skid sound was actually a nice sound played back incorrectly – a problem that was quickly fixed. Lastly playing with the settings in gfx.ini can improve the look of the game a lot with fog, mipmapping and motion blur on the menu to name just a few of the options. Of course you have to have a graphics card capable of delivering the goods.

Racer is very impressive and it isn't anywhere near finished yet. There is no damage model or four-wheel drive yet, and multiplayer racing isn't fully implemented as cars can't crash into each other, but these things will come. As development continues, the car models and tracks will inevitably become more refined, especially the physics and handling side, and we have all this to look forward to.

Racer

Supplier	Racer
Price	Free
Web	http://www.linuxracer.racesim.net
For	For Very impressive and expandable
Against	Hard to control with a gamepad

rating 

Info

Linux Input Drivers homepage (for more information on joysticks and driver)
<http://latrey.karlin.mff.cuni.cz/~vojtech/input>
 Racer homepage
<http://www.marketgraph.nl/gallery/racer>