

PHASER WORLD

OCTOBER 2017

ISSUE
101



THIS WEEK...

BATTLE TO THE BEEHIVE

PHASER CE 2.9.1 RELEASED

SKY KID MINI

ZNUMBERS TUTORIAL

Welcome to Issue 101 of Phaser World

Thank you to everyone who sent congratulatory messages my way about reaching the issue 100 milestone. I've always been proud of how the newsletter

and the community alike have evolved over the years, and I look forward to reporting on it for many more issues to come.

This week we've got some neat games, including a political beat-em-up and a new take on a Namco classic. There are multiple releases of Phaser CE and in the Dev Log we're having a particle party. I'm also pleased to say that our Slack channel is up to 1172 members now! There's nearly always something interesting going on in there. Do come in and join us.

So, until the next issue, keep on coding. Drop me a line if you've got any news you'd like featured. You can reply to this email or grab me on the Phaser [Slack](#) or [Discord](#) channels.



The Latest Games



Game of the Week

[Battle to the Beehive](#)

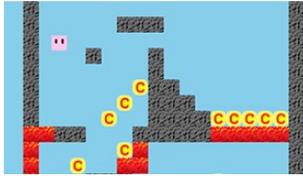
Pick a candidate and battle your way in to power in this Street Fighter inspired New Zealand election game.



Staff Pick

[Sky Kid Mini](#)

A game inspired by the Namco arcade classic from the 80s, revamped for their new games portal.



Pink

Leap across the levels, collecting coins and trying to beat Lunatic mode in this fun little platformer.



Yellow Out

Can you get the yellow car out in this sliding vehicle puzzle game?



Hungry Retro Pixel Snake

The classic Nokia snake game with a faux mobile skin.



What's New?



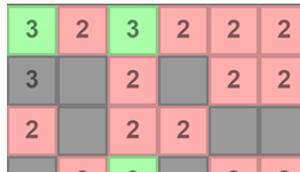
Phaser CE v2.9.1 Released

A small incremental update for Phaser CE, hot on the huge 2.9 release.



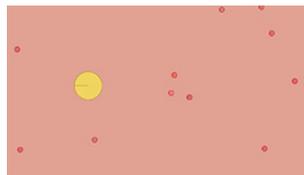
Phaser CE v2.9.0 Released

The latest version of Phaser CE is out.



zNumbers Game Tutorial

Fully commented source for a fun number sliding puzzle game.



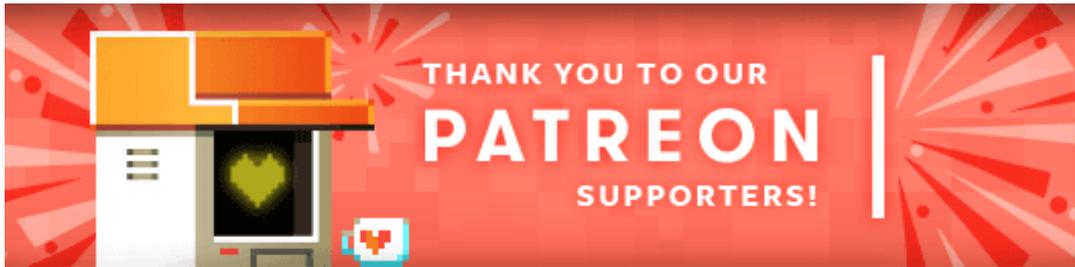
Multiplayer Game Tutorial Part 4

In the next part of this multiplayer game tutorial food pick-ups are added.



HTML5ゲームエンジン「Phaser」勉強会

A Phaser Study Group at HaLake Co-working space, Koshigaya, Saitama Prefecture (Japan)



Welcome and a massive thank you to the new [Phaser Patreons](#) who joined us this week: **Nathan Bean** and our new super-backer **Lernin Games**.

Patreon is a way to contribute towards the Phaser project on a monthly basis. This money is used *entirely* to fund development costs and is the only reason we're able to invest so much time into our work. You can also [donate](#) via PayPal.

Backers get forum badges, discounts on plugins and books, and are entitled to free monthly coding support via Slack or Skype.



Dev Log #101

First of all, [Phaser 3 Beta 7](#) is out. This includes a bunch of PRs from various contributors (thank you!) - one of which should get Phaser 3 running on older browsers that don't support the URL API. It also fixes a bug introduced in the Origin component which broke Text rendering and other things in Beta 6. You can download pre-built files from GitHub or get it from npm.

There's a Doctor in the House

In issue 100 I talked about how I had been building tools to help with the documentation process. And last week I put those tools to the test in earnest. I literally spent *days* adding JSDoc blocks into the Phaser 3 source. It's still taking ages, not least because there is simply so much to document. By way of example: there are 1,111 source files that need documenting across the whole API. By the end of Friday, I had managed to complete the docblocks for 508 of them, which is 46% complete.

Out of curiosity, I installed a sloc package into the repo and as of now, we've 46,161 lines of source in Phaser 3 and 15,046 lines of comments.

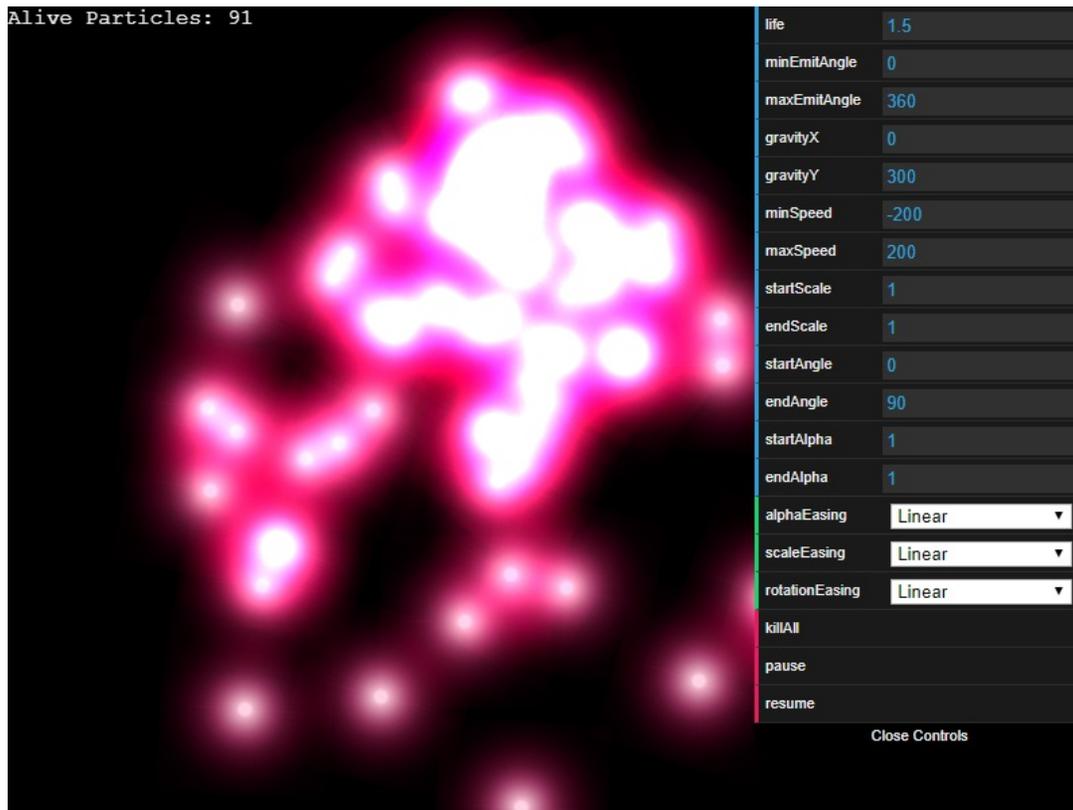
Truth be told, it's quite a painful process, even with my new tools. They absolutely speed things up but it's the mental overhead of having to process every file, check all of the data-types, ensure the return types match and the namespaces are correct, and then repeat through hundreds upon hundreds of files. It's mentally exhausting. On Friday I put the entire Armin van Buuren 5.5 hour [Untold Festival set](#) on and listened to the *whole thing* while working on the docs. Trance is easily one of my go-to genres of music when it comes to repetitive tasks :) Armin is doing a special 836 minute long set this week as part of his podcast, so I may be needing that to get more docs done!

I've also been tidying up the global API structure as I go. Some areas have been consolidated into others to try and bring the size of the top-level hierarchy down to just the core. I've also removed some modules that aren't needed for launch and generally have been tidying up a lot as I go.

This week I will carry on with the documentation. I'd love to get the API to at least 75% complete by the next issue. I'm going to have to take a little break out to work on something more creative as I go, because I'm worried I can't mentally sustain 5 solid days of intense doc work, but just know that progress is great and we will get there soon!

It's Party Time

A few issues ago I mentioned that we had added a new Particle Emitter into Phaser 3. I wanted to show it off then, but I knew that during the time I was working on the docs there would be nothing fun to show you. As important as jsdoc blocks are, they're hardly visually stimulating. So, this issue I'm going to share some of the work we've done with particles. First, a demo:

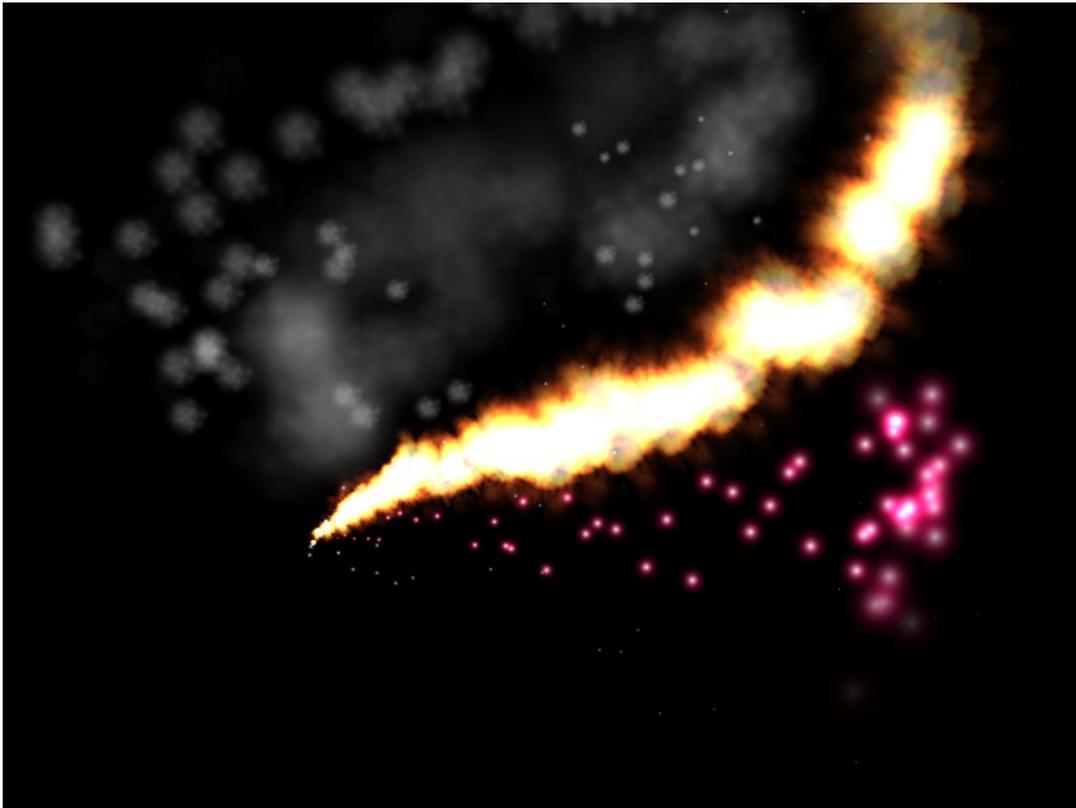


Play with our particle editor

Have a good play with the interface to get a feel for what the new particle system can do.

In Phaser 2 particles were essentially just Arcade Physics bodies spawned in a Group, with some extra properties to handle lifespan, scale and so on. This was good in that it meant you could collide with particles, or collide particles with things like Tilemaps. But otherwise, was pretty bad in every other sense. In most games the particles are visual effects, things that reinforce the story or urgency of a situation - such as a stack of coins flying into the air from a loot drop, or an alien ship exploding into a hundred pieces. They're not *usually* actual gameplay elements that you interact with, but rather are the byproduct of having done such an action.

For Phaser 3 it was important we moved the particles back to being visual effects first and foremost, with the ability to become more if you required it, not the other way around. Felipe worked on a brand new rendering system for them and implemented WebGL and Canvas renderers using a new customised batch. In short, they're fast. Very fast. And are optimized to offer speed first, allowing you to blast them all over your game without having to worry *too much*. Here's a fun little particle trail that follows the mouse position:



Mouse on fire!

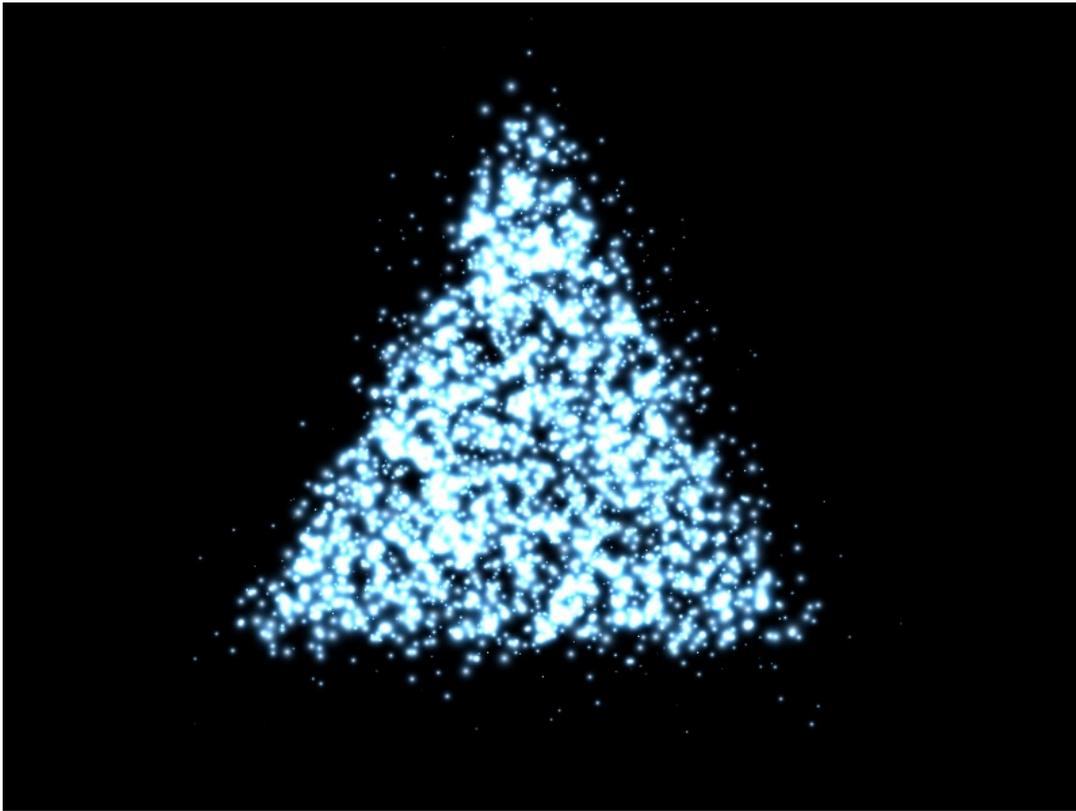
Emitter Properties

If you've played with the demo above you'll see that particles have various inbuilt properties such as the angle of emission, gravity, velocity, scale, alpha, rotation and the ability to define eases for the most common of these. In order to keep them fast, a single emitter is locked to a single texture, that is, it cannot switch texture part-way through rendering a batch. However, it can emit any frame of a texture, meaning if you bundle all your particles together in a single atlas it can batch the lot. Here's an example of several emitters running in parallel:



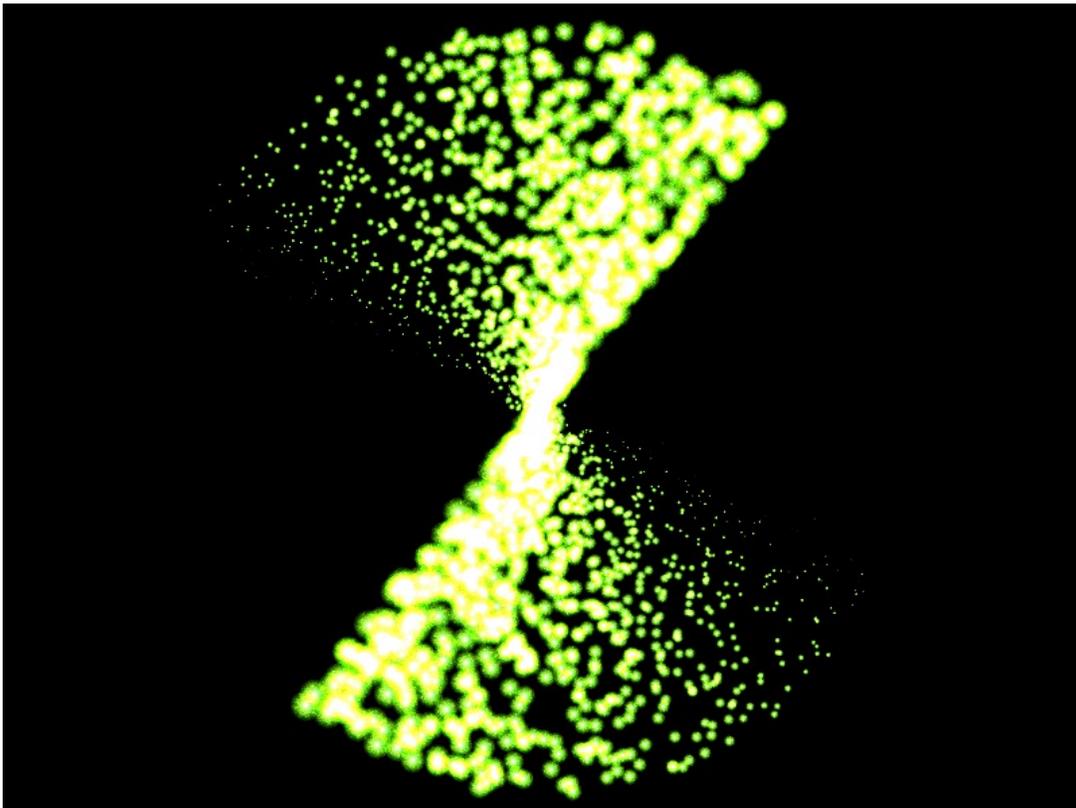
November the 5th arrived early this year

The use of a blend mode really adds to this example. You're not just limited to emitting particles from a point though. We also added the ability to emit from anywhere in a given shape. In the following example move the mouse around and click to change the shape:



Mouse and click

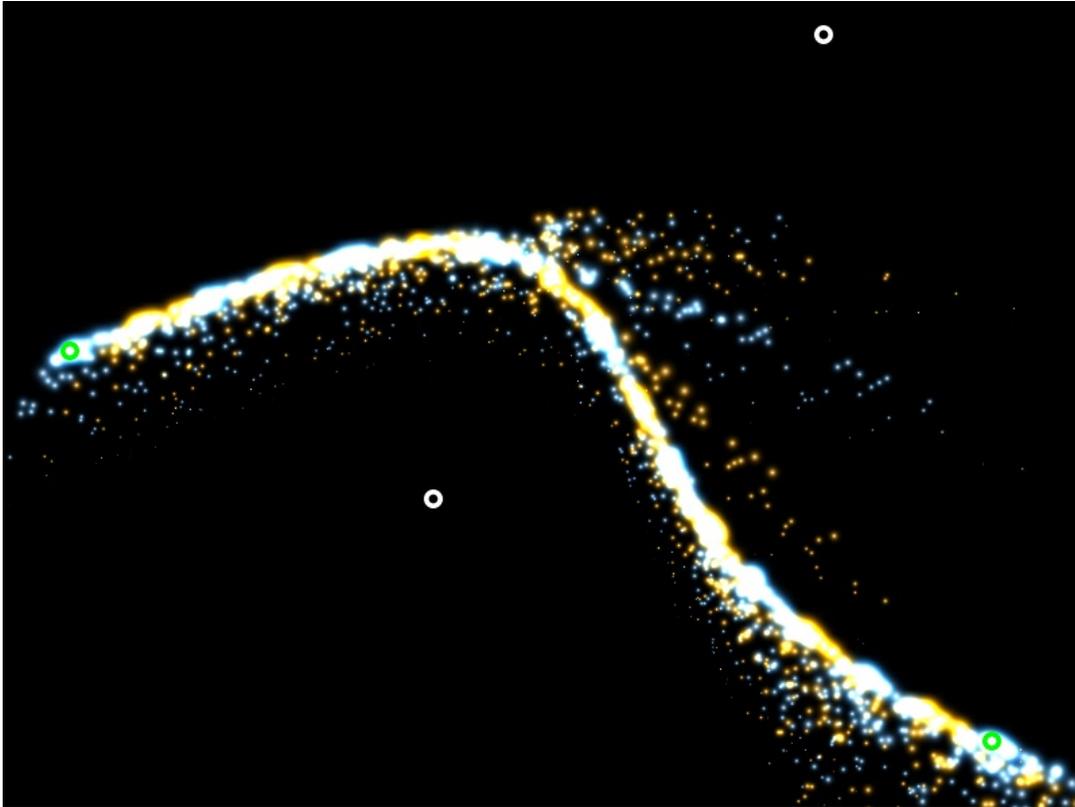
Combining shapes with emitters is always great fun. Here is what happens if you rotate a Line shape while using it as the source of an emitter:



Is there anyone out there?

Emitters and Paths

Being able to emit from a shape is great - but you can also emit from a Path too. There are several options here. For example, you could release a follower along a Path (see Dev Log 99 for more) and then attach an emitter to it. Or, you could get the points on a path and then emit a particle from each one. This opens up all kinds of possibilities for visual effects. Have a play with this spline curve that has an emitter bound to it. Drag the nodes around and see it update in real-time:



Drag the path nodes

As of Beta 7 the new Particle Emitter is implemented and working. You can find a load of examples to play with. However, I'll warn you now, the API is going to be changing in the coming weeks. Not dramatically, but at the moment things like the particle physics step is calculated in the emitter rather than the particle, which will make it very hard for you to extend and adapt. So I'm going to be shifting things around and delegating tasks out more to the Particle itself, and leaving the emitter as being in charge of the rendering and parenting. Fundamentally, what you see today will remain, it's just internally things with need tidying up.

Please have a play though. I'd love to see someone try to work particles into a little game and report back to me if you find anything that needs tweaking.

Phaser 3 Labs

[Phaser 3 Beta 7](#) is out and ready for testing.

Visit the [Phaser 3 Labs](#) to view the new API structure in depth, read the FAQ, previous Developer Logs and contribution guides.

You can also join the [Phaser 3 Google Group](#) or post to the [Phaser 3 Forum](#) - we'd love to hear from you!



Not really geeky, but I got to see [Under An Arctic Sky](#) at the weekend and loved it. A bunch of surfers take-on the biggest storm to hit Iceland in 25 years.

Do you use via Wi-Fi? I strongly suggest you read this then: [WPA2 Krack Vulnerability](#). This attack works against *all modern wifi networks*, even encrypted ones.

[windy.com](#) is one of my favorite web sites at the moment - especially as today it's like someone dropped a giant particle emitter on the UK.

Phaser Releases

Phaser CE [2.9.1](#) released October 10th 2017.

Phaser 3 [Beta 7](#) released October 16th 2017.

Please help [support](#) Phaser development

Have some news you'd like published? Email support@phaser.io or [tweet us](#).

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