

The Web Becomes Graceful

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I've seen the

FUTURE

It's in my

BROWSER



It's the standard's standard

<http://www.w3.org/html/logo/>

<http://adactio.com/journal/4289/>

“html is now html5” – W3C



“html5 is now html” – WHATWG



<http://blog.whatwg.org/html-is-the-new-html5>
<http://adactio.com/journal/4301/>



What about all the people who just ordered a new HTML5 Thong?

WTF IS INTERNET EXPLORER?

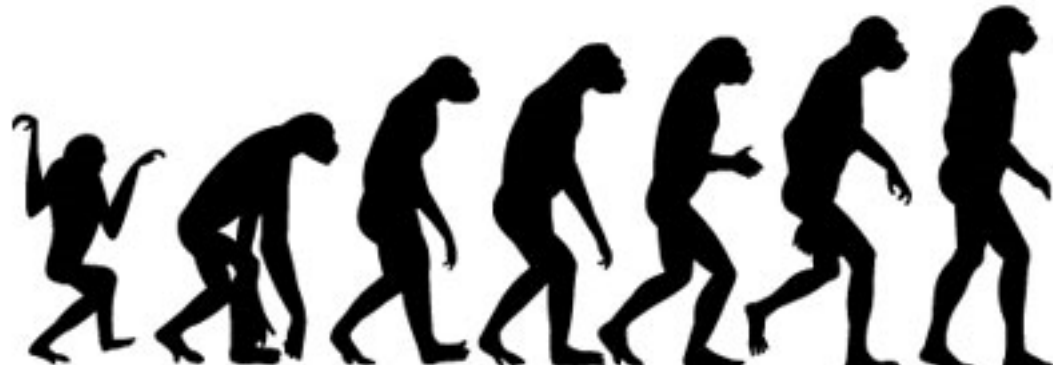
Internet Explorer is just a lame Windows XP tool which allows users to browse to Mozilla.com and download Firefox.



Firefox 4

- JägerMonkey
- ECMAScript 5
- WebGL
- Web Console
- DOM & CSS
- ...

什么他妈的叫他妈的惊喜！



SpiderMonkey TraceMonkey **JägerMonkey**



Why it's hard to run JS fast

2 reasons

1. not possible to determine the types of values ahead of time
2. Interpreters are easier to create, but they incur extra runtime overhead for tracking their internal state

- 解释器 Interpreter
- 虚拟机 Virtual Machine
- AOT (Ahead Of Time)
- JIT (Just In Time)

Google Chrome 9支持WebGL



<http://webkit.org/blog/603/webgl-now-available-in-webkit-nightlies/>

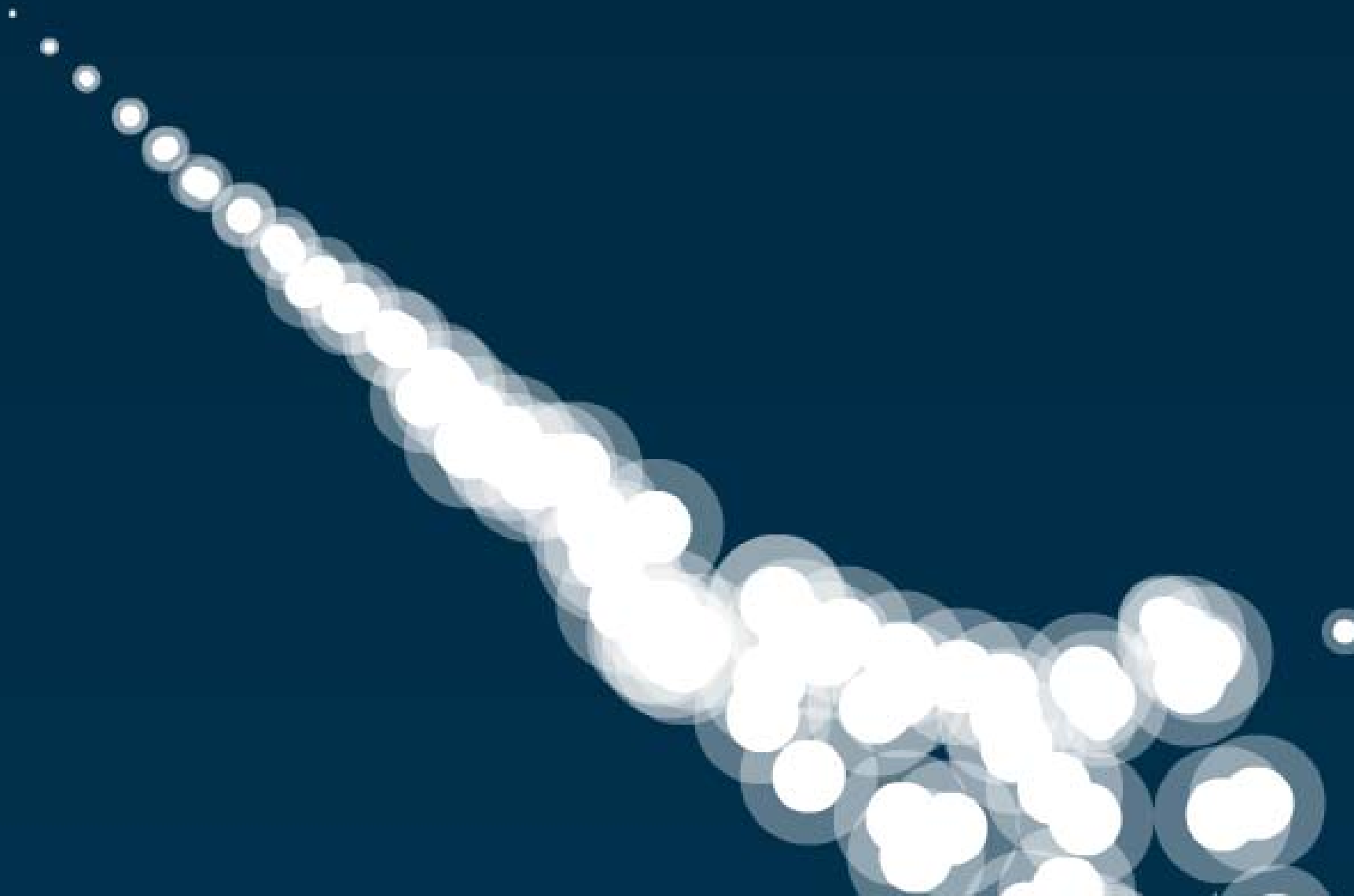
<http://googlesystem.blogspot.com/2010/12/chrome-9-sandboxes-flash-and-adds-webgl.html>

<http://drawlogic.com/2010/12/16/webgl-will-be-part-of-chrome-9-regular-releases/>

Web的舞台正在变大

- 创意动画
- 广告
- 富媒体应用程序
- 在线游戏

粒子特效



Creating a particle
system may
sound difficult , but it's not rocket
science.

粒子的生命周期

Particle	
init	出生
update	更新
destroy	消亡

运动、时间、位置

motion

is a change in **position** of an object
with respect to **time**

速度

velocity

is the measurement of the rate and direction of **change** in **position** of an object

加速度

Acceleration

is the rate of change of
velocity over time

构造粒子

```
function Particle(){  
    this.x = this.y = 0;           //位置  
    this.vx = this.vy = 0;        //速度  
    this.ax = this.ay = 0;        //加速度  
}
```

粒子的更新

```
Particle.prototype.update = function(ctx){  
    this.vx += this.ax;  
    this.vy += this.ay;  
    this.x += this.vx;  
    this.y += this.vy;  
    //draw particle using canvas API  
}
```

创建一个粒子

```
ParticleSystem.createSystem("canvas1", {  
  setup: function(container){  
    var p = new Particle();  
    p.x = 250;  
    p.y = 150;  
    container.addParticle(p);  
  }  
});
```



让粒子飞一会

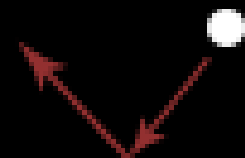
```
p.vx = p.vy = 3;
```

```
p.onUpdate = function(){
```

```
  if(p.x > 500 || p.x < 0) p.vx = -p.vx;
```

```
  if(p.y > 300 || p.y < 0) p.vy = -p.vy;
```

```
}
```

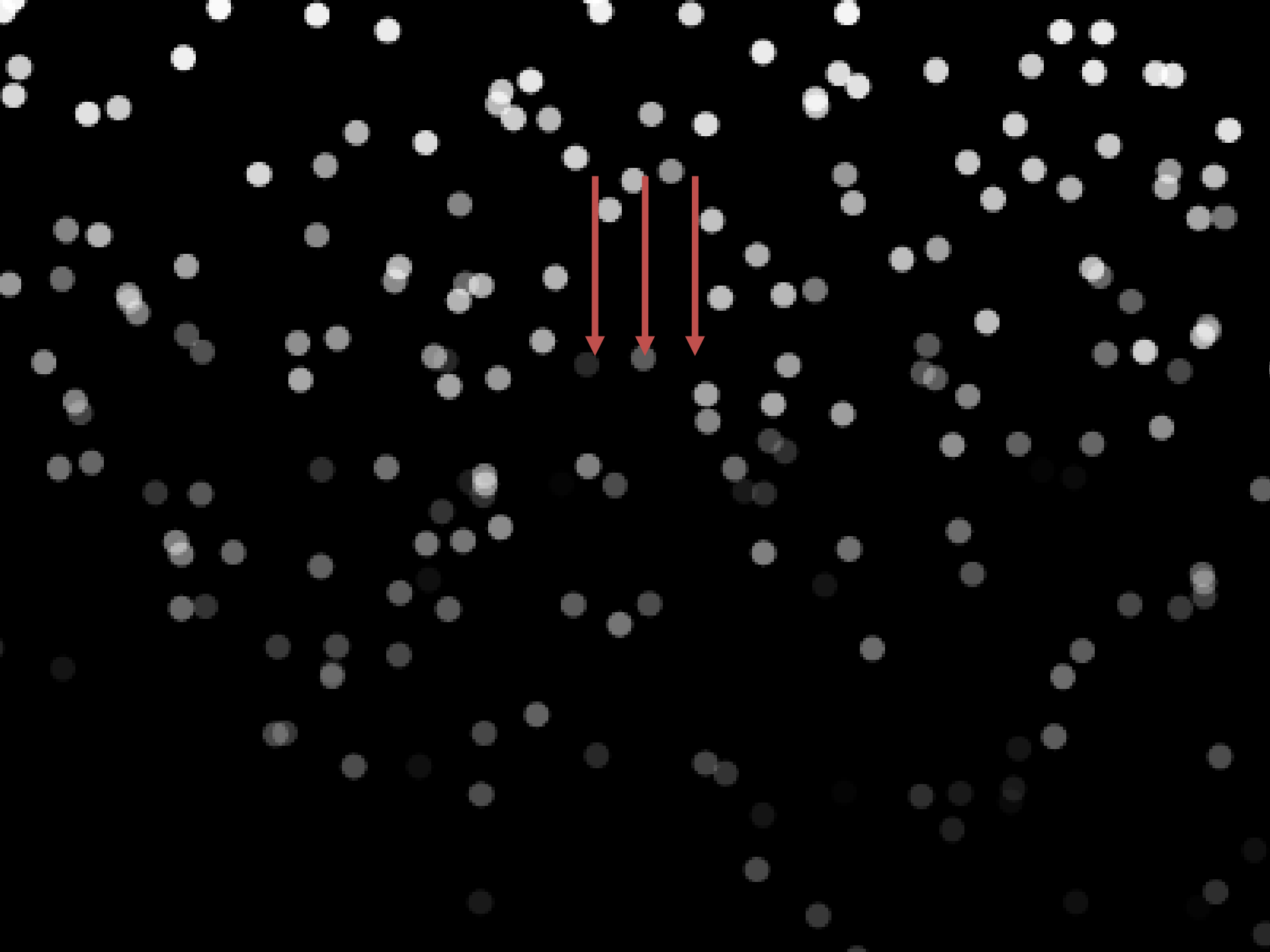


数大便是美

这树可真他妈大

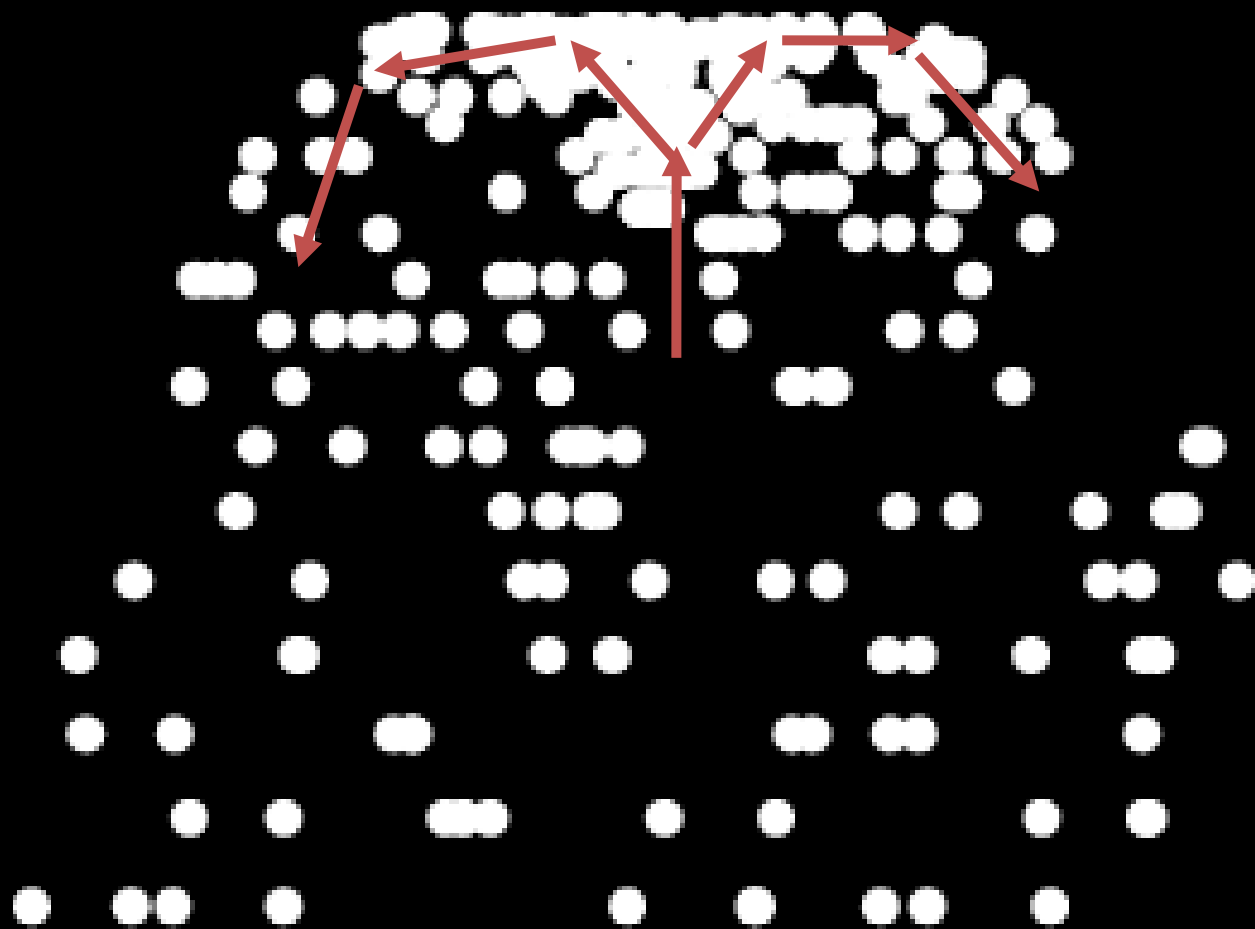
一起飞

```
ParticleSystem.createSystem("canvas3", {  
  update: function(container){  
    var p = new Particle();  
    p.x = Math.random()*900;  
    p.y = -Math.random()*20;  
    p.vy = 3 + Math.random()*5;  
    container.addParticle(p);  
  }  
});
```



加速飞

```
ParticleSystem.createSystem("canvas3", {  
  update: function(container){  
    var p = new Particle();  
    p.x = 250;  
    p.y = 150;  
    p.vx = 5 - Math.random()*10;  
    p.vy = -10;  
    p.ay = 0.98;  
    container.addParticle(p);  
  }  
});
```



看一下效果

<http://kxt.koubei.com/labs/zhengxie/presentations/particles.html>

<http://colorhook.com/labs/presentations/particles.html>



Thank You