

# Actionscript 3.0 Basics

7 – Gaming Utils

# Keyboard Management

## KeyboardEvent

KEY\_UP

KEY\_DOWN

```
1  import flash.events.KeyboardEvent;
2
3  stage.addEventListener(KeyboardEvent.KEY_UP, onKeyUp);
4  stage.addEventListener(KeyboardEvent.KEY_DOWN, onKeyDown);
5
6  function onKeyUp(e:KeyboardEvent):void
7  = {
8      trace("up", e.keyCode);
9  }
10
11 function onKeyDown(e:KeyboardEvent):void
12 = {
13     trace("down", e.keyCode)
14 }
```

# Keyboard Management

You can find many  
keycode constants  
on the Keyboard Class

## AS3 KeyboardEvent: Actionscript 3 keyCode list

August 6th, 2009

Below is a list of the CORRECT keyCodes for Actionscript 3.

Backspace = 8	E = 69	d = 68	2 = 50	Numpad 5 = 101
Tab = 9	F = 70	e = 69	3 = 51	Numpad 6 = 102
Enter = 13	G = 71	f = 70	4 = 52	Numpad 7 = 103
Shift = 16	H = 72	g = 71	5 = 53	Numpad 8 = 104
Control = 17	I = 73	h = 72	6 = 54	Numpad 9 = 105
CapsLock = 20	J = 74	i = 73	7 = 55	Numpad Multiply = 106
Esc = 27	K = 75	j = 74	8 = 56	Numpad Add = 107
Spacebar = 32	L = 76	k = 75	9 = 57	Numpad Enter = 13
PageUp = 33	M = 77	l = 76	;: = 186	Numpad Subtract = 109
PageDown = 34	N = 78	m = 77	=+ = 187	Numpad Decimal = 110
End = 35	O = 79	n = 78	-_ = 189	Numpad Divide = 111
Home = 36	P = 80	o = 79	/? = 191	F1 = 112
LeftArrow = 37	Q = 81	p = 80	`~ = 192	F2 = 113
UpArrow = 38	R = 82	q = 81	[{ = 219	F3 = 114
RightArrow = 39	S = 83	r = 82	\  = 220	F4 = 115
DownArrow = 40	T = 84	s = 83	] } = 221	F5 = 116
Insert = 45	U = 85	t = 84	" = 222	F6 = 117
Delete = 46	V = 86	u = 85	, = 188	F7 = 118
NumLock = 144	W = 87	v = 86	. = 190	F8 = 119
ScrLk = 145	X = 88	w = 87	/ = 191	F9 = 120
Pause/Break = 19	Y = 89	x = 88	Numpad 0 = 96	F10 = nokey
A = 65	Z = 90	y = 89	Numpad 1 = 97	F11 = 122
B = 66	a = 65	z = 90	Numpad 2 = 98	F12 = 123
C = 67	b = 66	0 = 48	Numpad 3 = 99	F13 = 124
D = 68	c = 67	1 = 49	Numpad 4 = 100	F14 = 125
				F15 = 126



# Keyboard Management

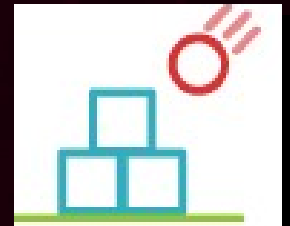
You can detect key chain combinations:

```
1  import flash.events.KeyboardEvent;
2  import flash.ui.Keyboard;
3
4  stage.addEventListener(KeyboardEvent.KEY_UP, onKeyUp);
5
6  function onKeyUp(e:KeyboardEvent):void
7  = {
8  =     if(e.ctrlKey && e.altKey && e.keyCode==Keyboard.DELETE){
9         trace("You Pressed CTRL + ALT + DEL");
10     }
11 }
```

# Physics Engine: Box2Dflash

Box2D is a 2D rigid body simulation library for games.  
From the game engine's point of view a physics engine  
is just a system for procedural animation.

<http://www.box2d.org/>  
<http://www.box2dflash.org/>



# Box2Dflash

## Pros:

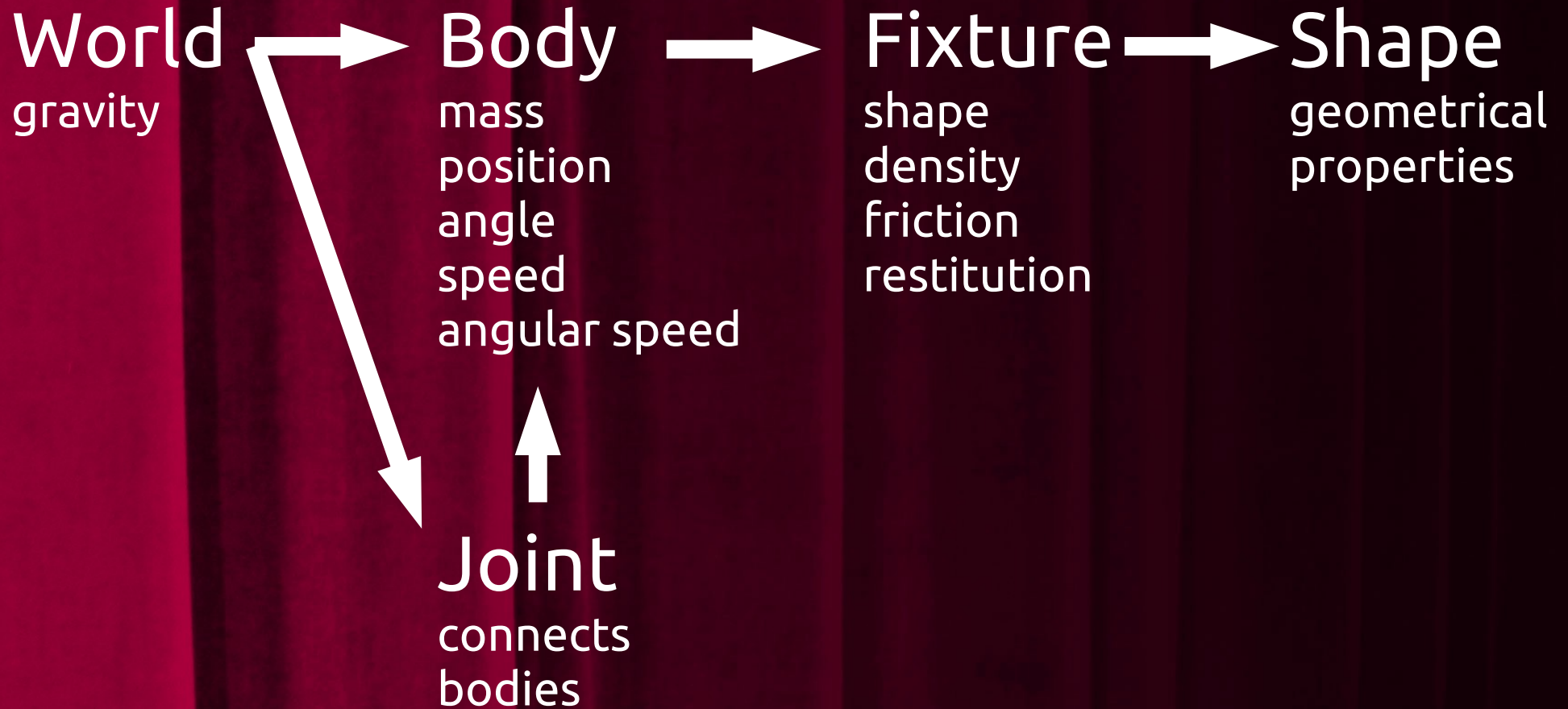
- Very accurate, realistic simulations.
- Continuous Collision Detection (CCD)
- Wide community, good support.
- Good performance overall.

## Cons:

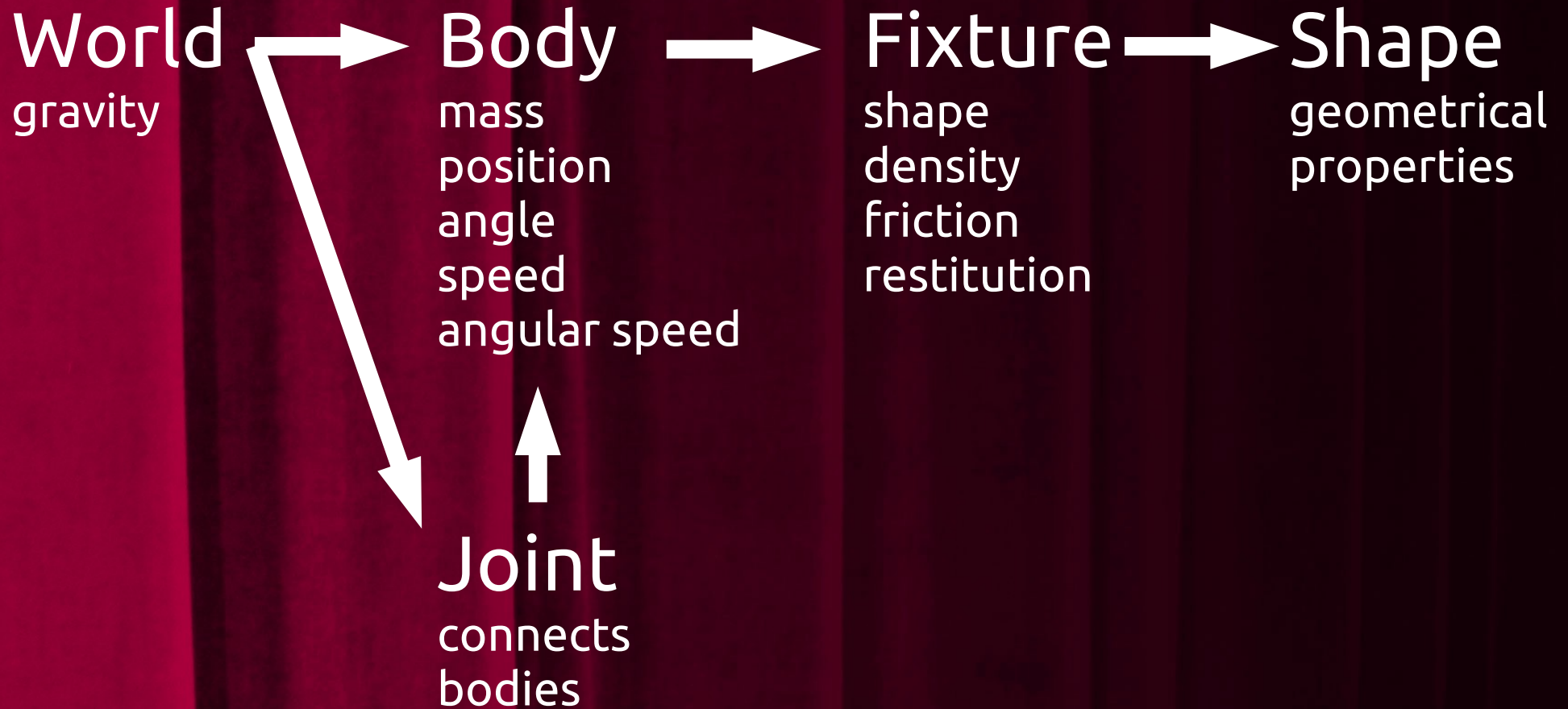
- Painful APIs.
- Many concepts inherited from C++ version, useless in as3.
- Complex code even for simple behaviors.
- Requires good physics knowledge (not sugar coded).



# Box2Dflash: Main Concepts



# Box2Dflash: Main Concepts





# Thanks!

[github.com/matix/as3basics](https://github.com/matix/as3basics)

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