

# SPRITEKIT

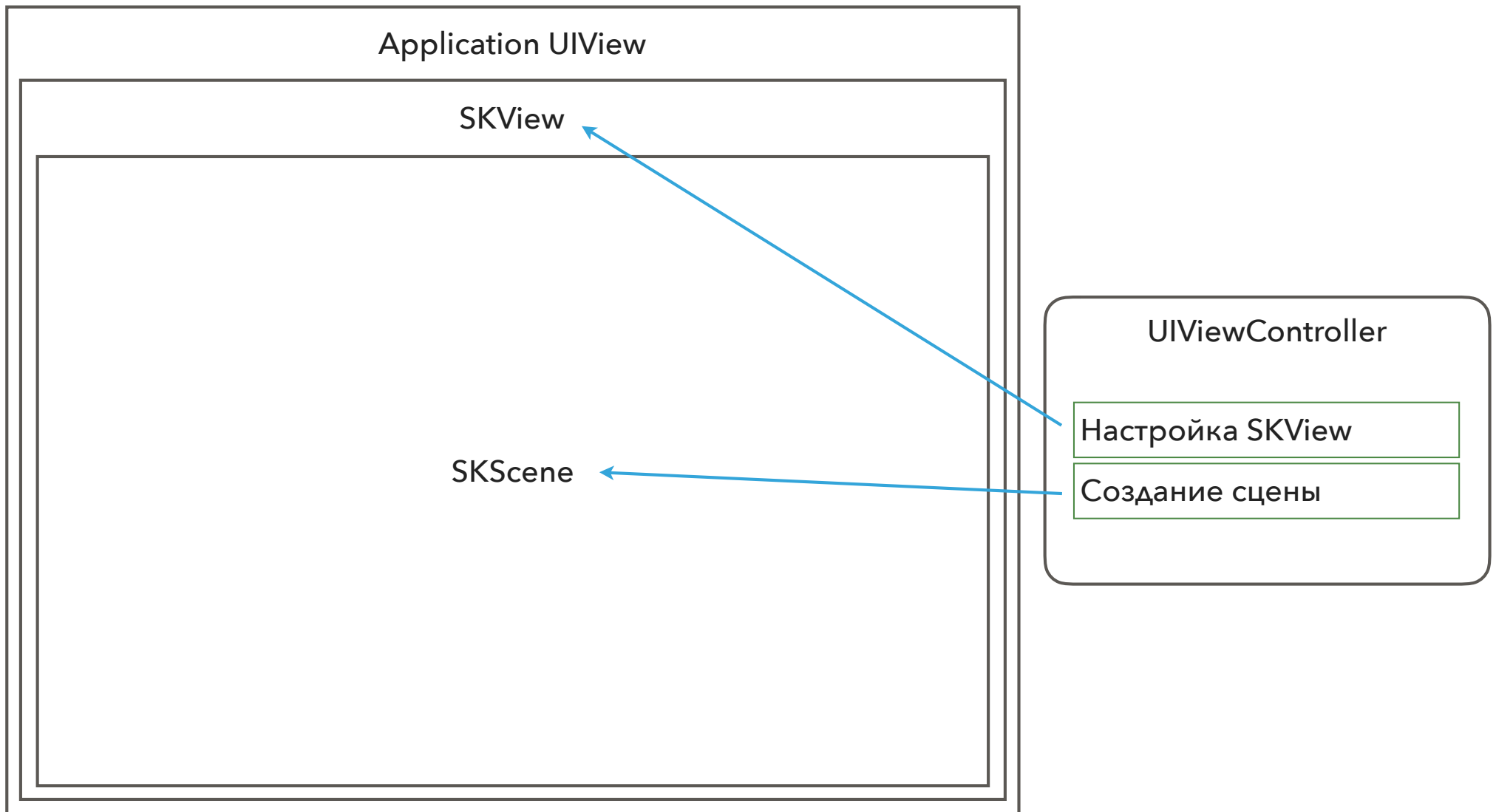
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# SKSCENE



## SKNODE

- ▶ SKSpriteNode
- ▶ SKLabelNode
- ▶ SKShapeNode
- ▶ SKEmitterNode
- ▶ SKEffectNode
- ▶ SKCropNode
- ▶ SKVideoNode

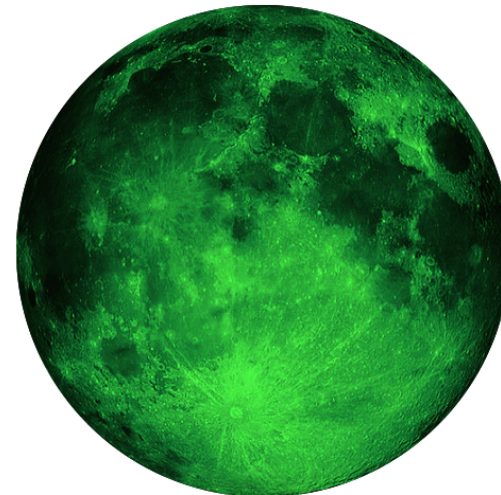
## SKNODE

- ▶ Положение, поворот, масштаб
- ▶ zPosition

## SKSPRITENODE



moon.png

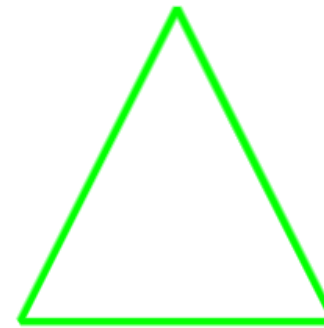
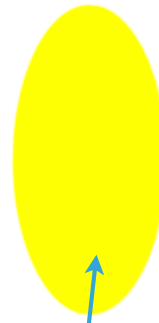
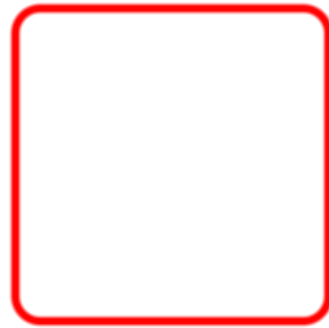


```
SKSpriteNode *moon = [SKSpriteNode spriteNodeWithImageNamed:@"moon.png"];
```

```
moon.color = [UIColor greenColor];
```

```
moon.colorBlendFactor = 0.7;
```

# SKSHAPENODE

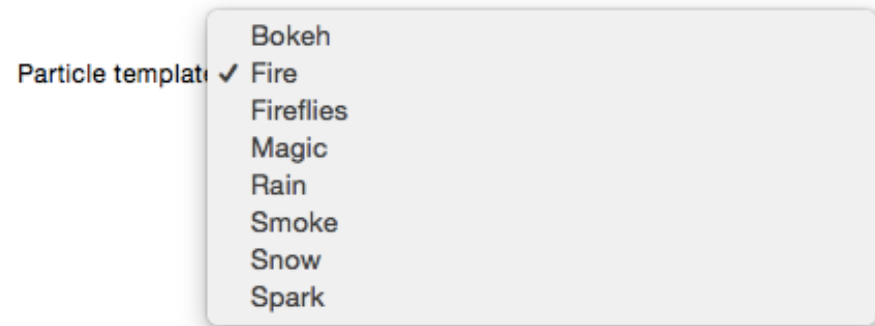
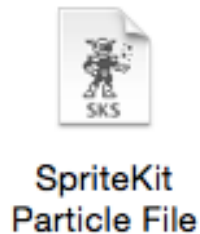


```
SKShapeNode *rect =  
[SKShapeNode  
shapeNodeWithRect:CGRectMake(  
0.0, 0.0, 100.0, 100.0)  
cornerRadius:8.0];  
  
rect.lineWidth = 3.0;  
  
rect.strokeColor = [SKColor  
redColor];
```

```
SKShapeNode *ellipse =  
[SKShapeNode  
shapeNodeWithEllipseInRect:  
CGRectMake(0.0, 0.0, 50.0, 100.0)];  
  
ellipse.fillColor = [SKColor  
yellowColor];
```

```
SKShapeNode *triangle =  
[[SKShapeNode alloc] init];  
UIBezierPath *bezierPath =  
[UIBezierPath bezierPath];  
...  
[bezierPath closePath];  
triangle.path = bezierPath.CGPath;  
triangle.strokeColor = [SKColor  
greenColor];  
triangle.lineWidth = 3.0;
```

# SKEMITTERNODE



```
NSSpriteNode *cloud = ...
```

```
NSString *rainPath = [[NSBundle mainBundle] pathForResource:@"rain" ofType:@"sks"];
```

```
SKEmitterNode *rain = [NSKeyedUnarchiver unarchiveObjectWithFile:rainPath];
```

```
rain.position = CGPointMake(0, cloud.size.height - 10);
```

```
[cloud addChild:rain];
```

```
rain.particleScale = 2;
```

## SKEFFECTNODE

Применяет **CIFilter** для потомков

**CIFilter** - мощный фильтр CoreImage

Может быть применен для всей сцены

```
SKEffectNode *blur = [[SKEffectNode alloc] init];  
moon.blendMode = SKBlendModeAdd;  
[blur addChild:moon];  
CIFilter *filter = [CIFilter filterWithName:@"CIGaussianBlur"];  
[filter setDefaults];  
blur.filter = filter;  
[self addChild:blur];  
self.shouldEnableEffects = YES;
```





## SKCROPNODE

```
SKSpriteNode *brickwall = [SKSpriteNode  
spriteNodeWithImageNamed:@"brickwall.jpg"];  
SKCropNode *crop = [SKCropNode node];  
[crop addChild:brickwall];  
[crop setMaskNode:moon];  
[self addChild:crop];
```



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## SKVIDEONODE

- ▶ Видео = компонент
- ▶ AVPlayer (AVFoundation.framework)
- ▶ Вся функциональность AVFoundation

```
[SKVideoNode videoNodeWithVideoFileNamed:@"video.mp4"];
```

```
[SKVideoNode videoNodeWithAVPlayer:player];
```

# ДЕЙСТВИЯ

## Создание действий

```
[SKAction moveTo:CGPointMake(100,100) duration:1.0];
```

```
[SKAction rotateByAngle:M_PI duration:1.0];
```

```
[SKAction fadeAlphaTo:0.75 duration:1.0];
```

```
[SKAction scaleBy:10.0 duration:1.0];
```

## Применение действий

```
SKAction *move = [SKAction moveTo:aPoint duration:0.0];
```

```
[moon runAction:move];
```

## ПОВТОРЯЮЩИЕСЯ ДЕЙСТВИЯ

```
SKAction *move = [SKAction moveTo:aPoint duration:0.5];
```

```
SKAction *repeat = [SKAction repeatAction:move count:3];
```

```
SKAction *repeatForever = [SKAction repeatActionForever:move];
```

# ОБЪЕДИНЕНИЕ ДЕЙСТВИЙ

1 сек

2 сек

1.5 сек

```
[node runAction:[SKAction sequence:@[action1, action2, action3]]];
```

1 сек

2 сек

1.5 сек

```
[node runAction:[SKAction group:@[action1, action2, action3]]];
```

## SKPHYSICSBODY И SKPHYSICSWORLD

```
moon.physicsBody = [SKPhysicsBody bodyWithCircleOfRadius: moon.size.width / 2];
```

```
moon.physicsBody.mass = 10;
```

```
moon.physicsBody.velocity = aCGVector;
```

```
self.physicsWorld.gravity = CGPointMake(0.0, -9.8);
```

```
self.physicsWorld.gravity = CGPointMake(0.0, +9.8);
```

**СПАСИБО ЗА ВНИМАНИЕ**