Enhancing User Experience with Scroll Views

Session 223

Josh Shaffer
iOS Frameworks

These are confidential sessions—please refrain from streaming, blogging, or taking pictures

Enhancing User Experience with Scroll Views

Enhancing User Experience with Scroll Views

- UIScrollView configuration

Enhancing User Experience with Scroll Views

- UIScrollView configuration
- Improving paged scrolling

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- UIScrollView configuration
- Improving paged scrolling
- Integrating with OpenGL

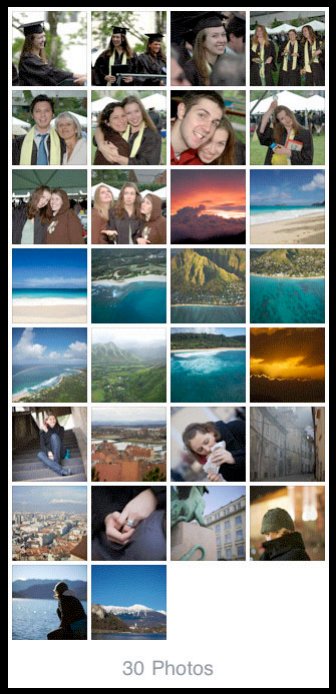
Enhancing User Experience with Scroll Views

- UIScrollView configuration
- Improving paged scrolling
- Integrating with OpenGL
- Controlling stop offset

UIScrollView Configuration

Review of the basics

Content Size



Content Size

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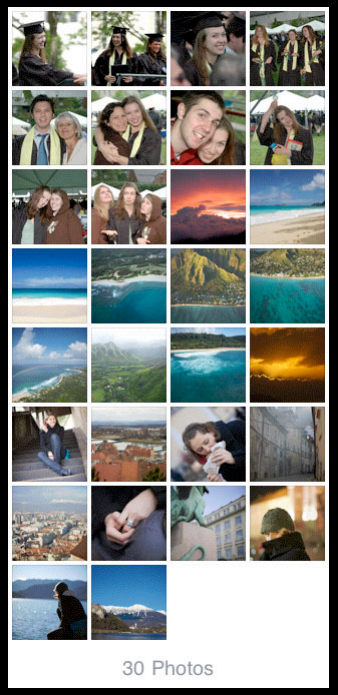
contentSize.height



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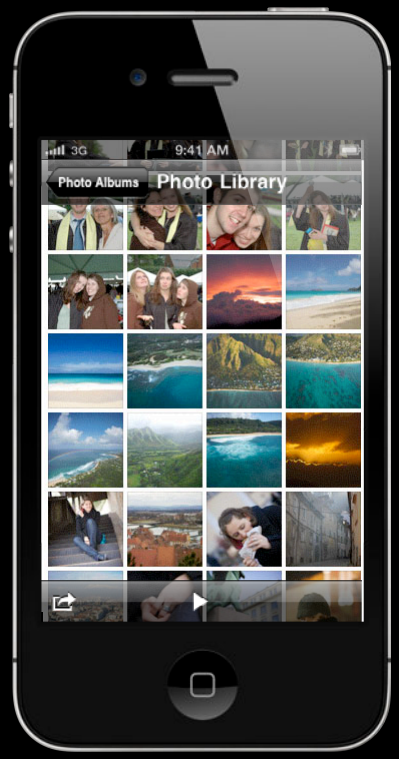

Content Offset

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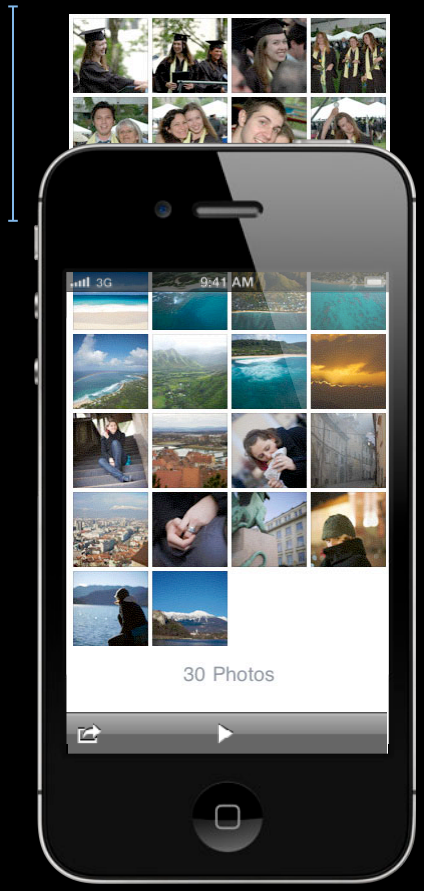
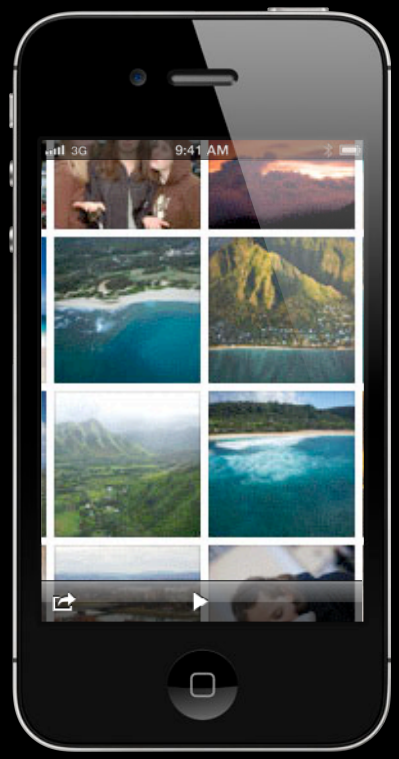


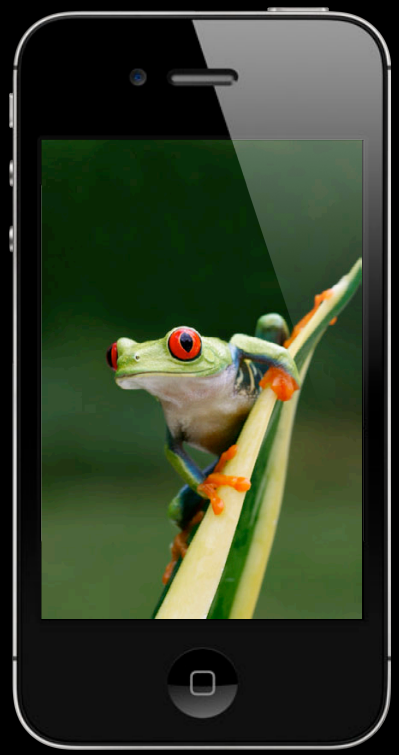
Content Offset

View for Zooming in Scroll View

View for Zooming in Scroll View



Paged Scrolling



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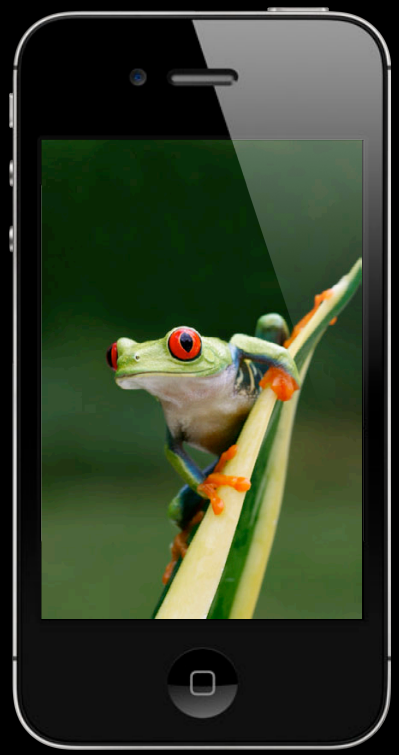

View Configuration

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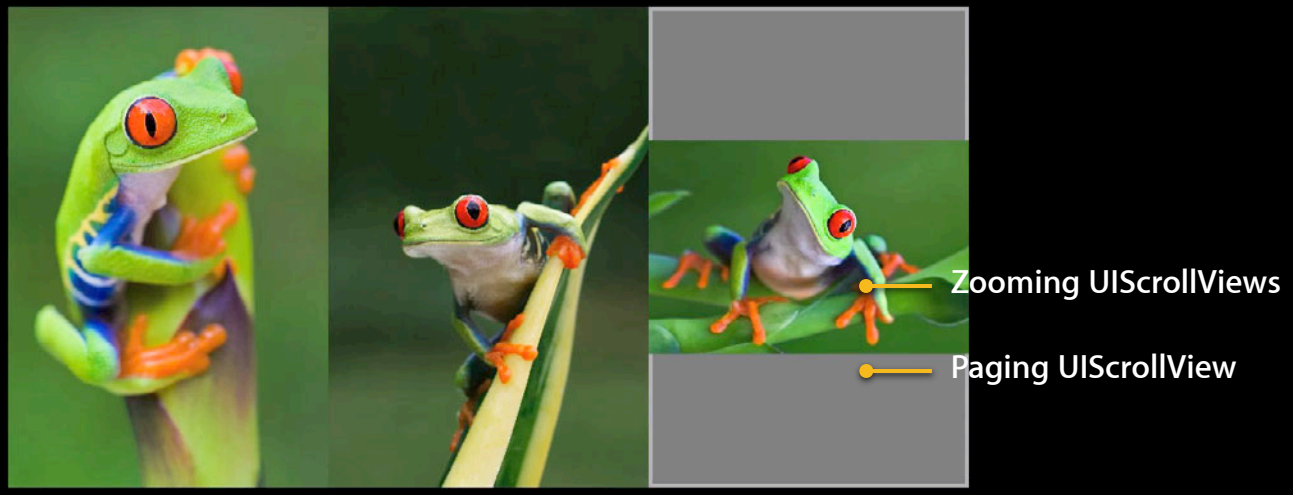
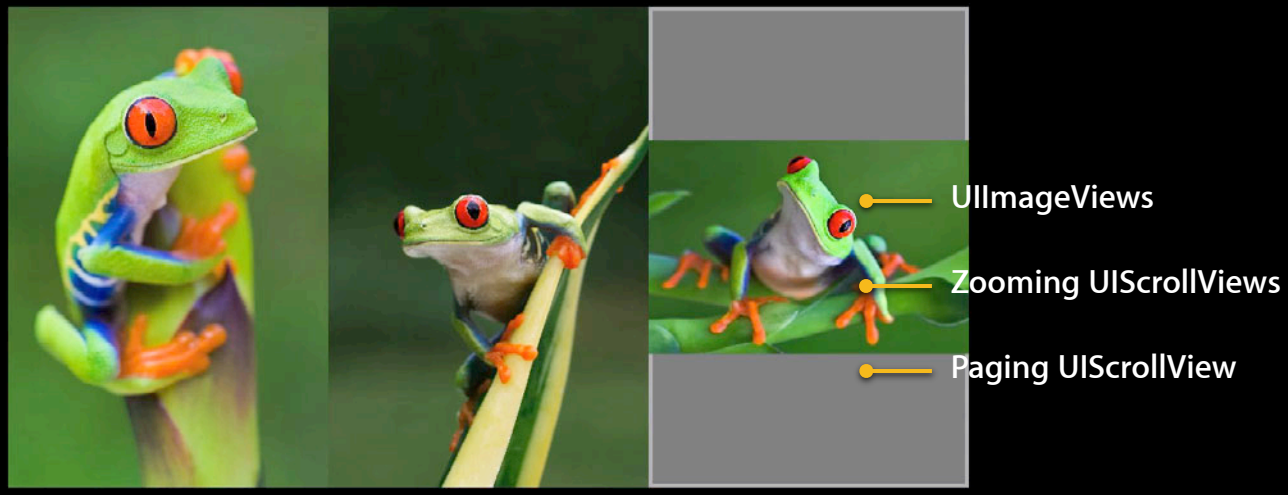
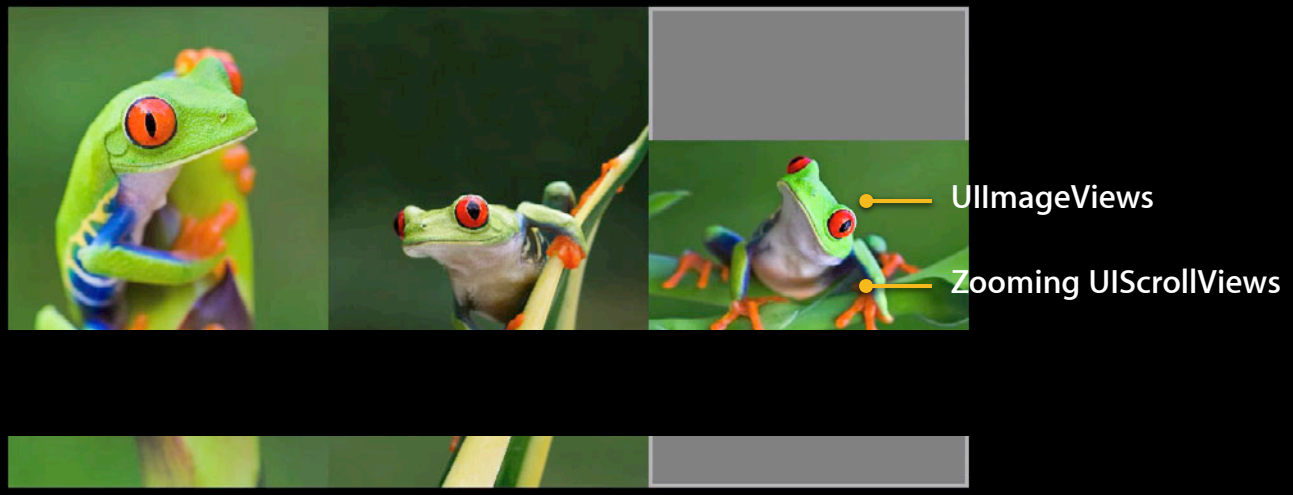


View Configuration



View Configuration

UIPageViewController



View Configuration

UIPageViewController

- UIImageViews
- Zooming UIScrollViews

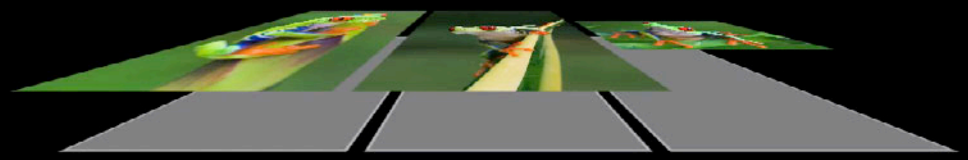
Page Spacing

Page Spacing

Page Spacing

UIPageViewControllerOptionInterPageSpacingKey

Page Spacing



Page Spacing

Paged Scrolling

Paged Scrolling

Paged Scrolling

After view controller

Paged Scrolling

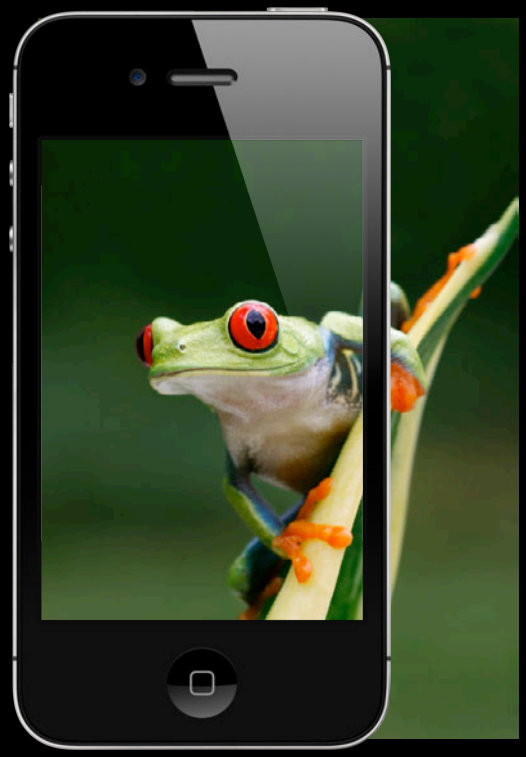
Paged Scrolling

Paged Scrolling

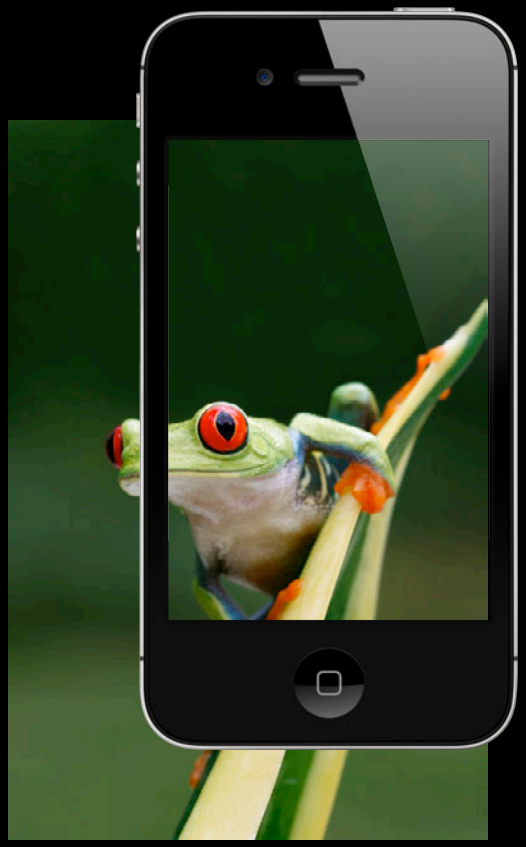
Before view controller

Paged Scrolling

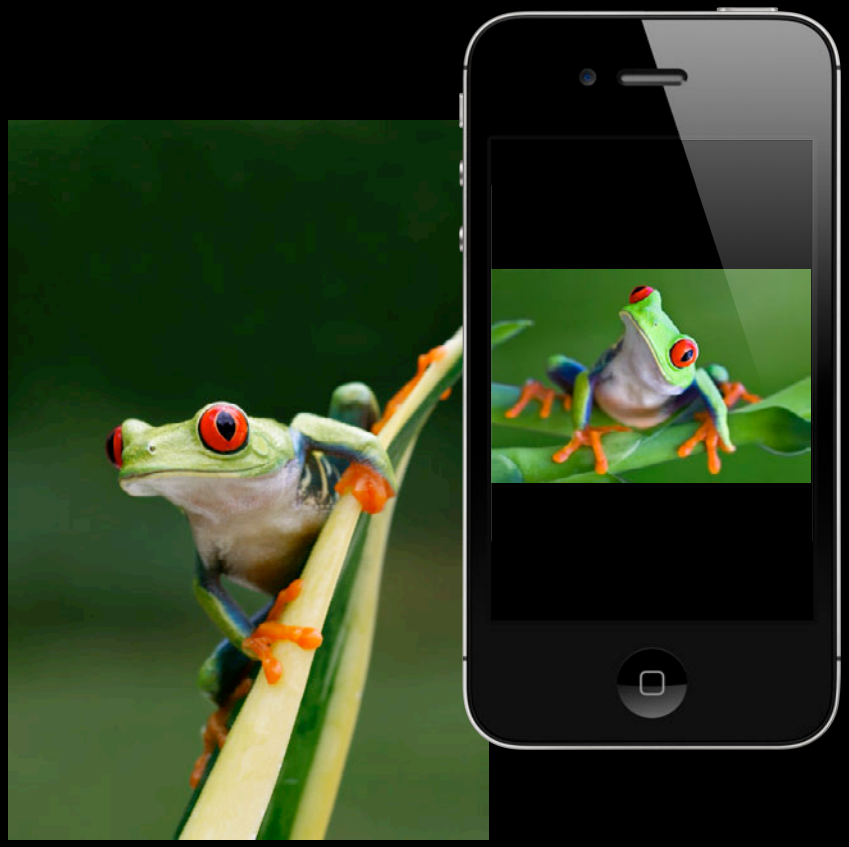
Zooming



Zooming



Paged Scrolling

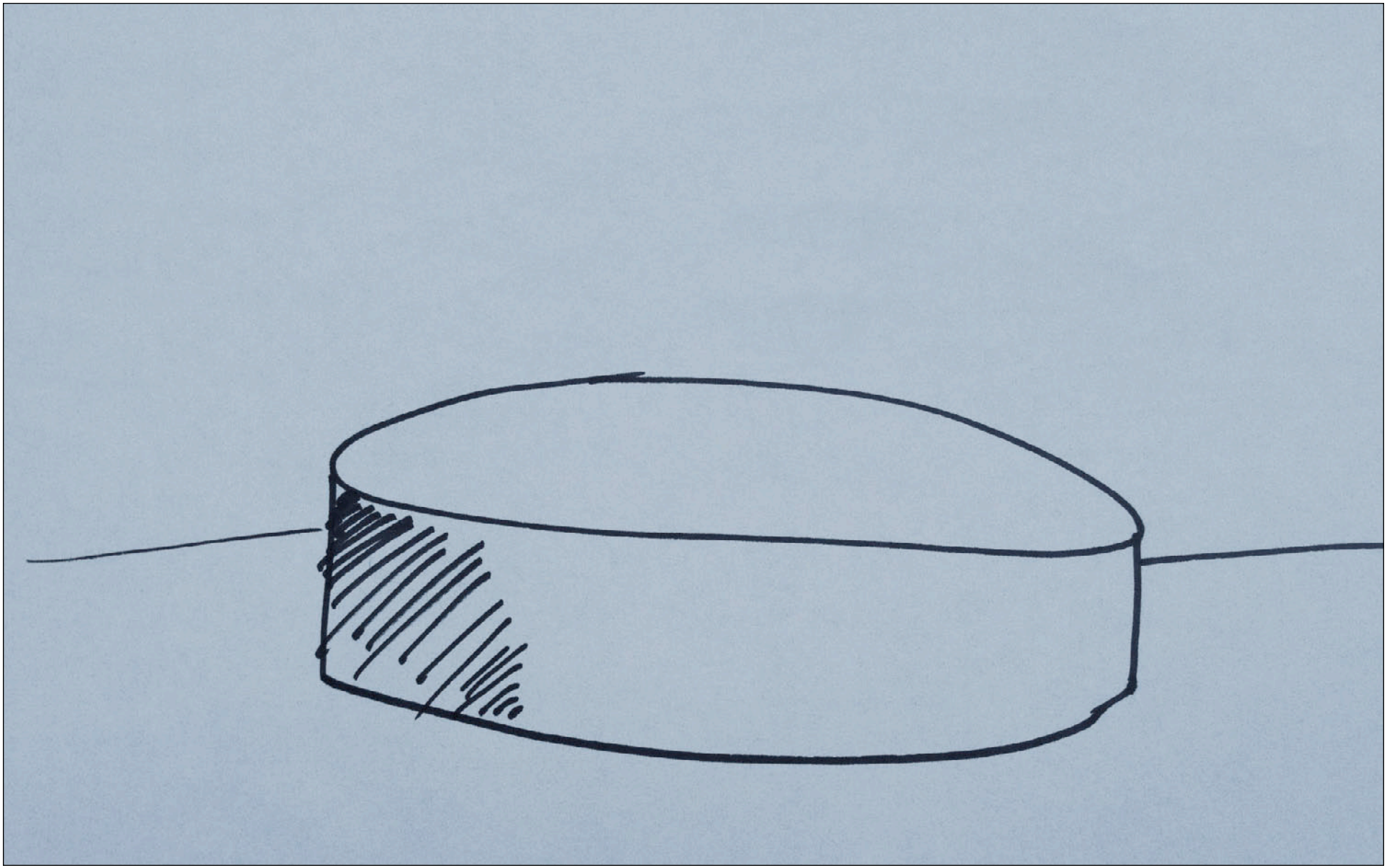


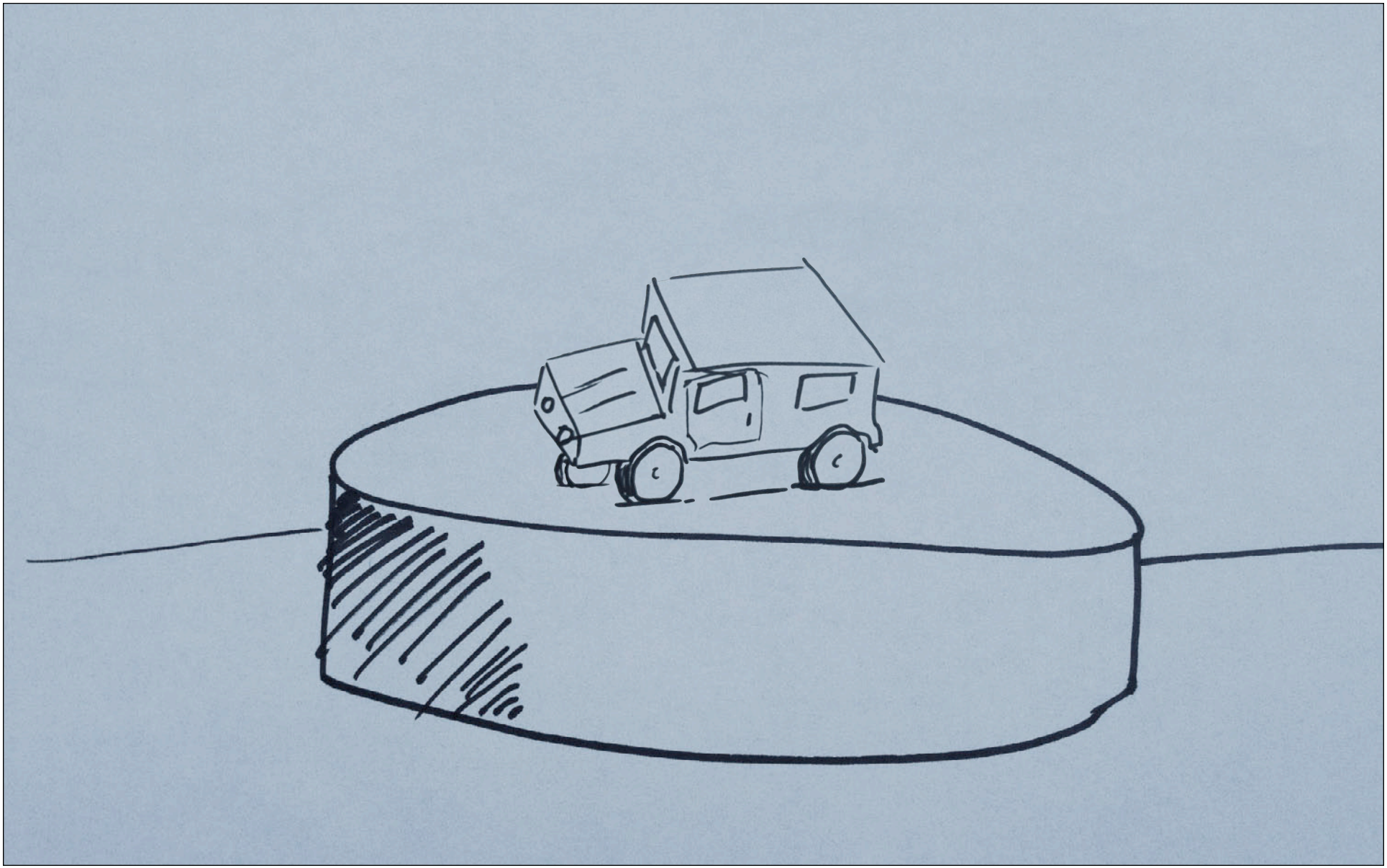
Paged Scrolling

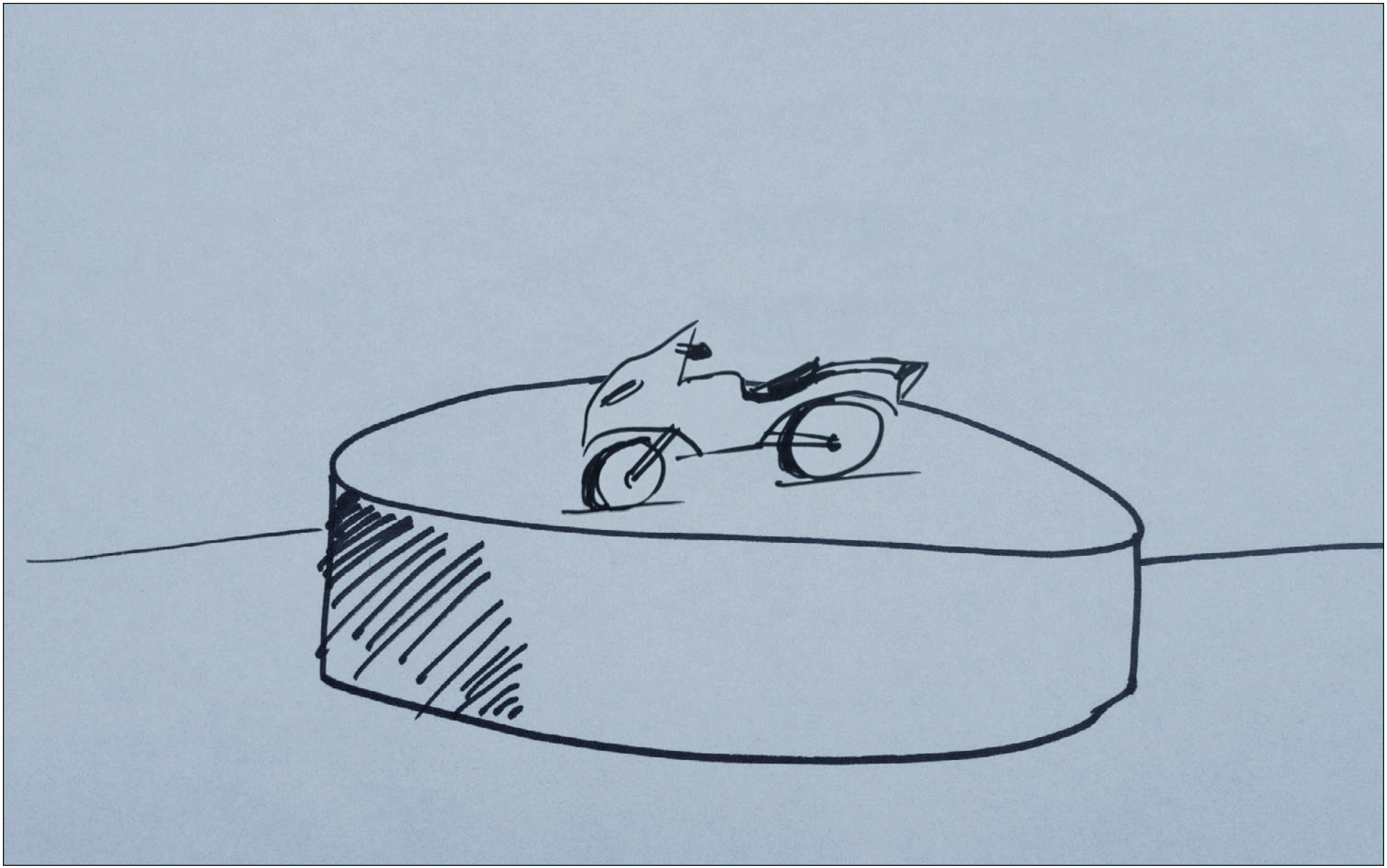
Demo

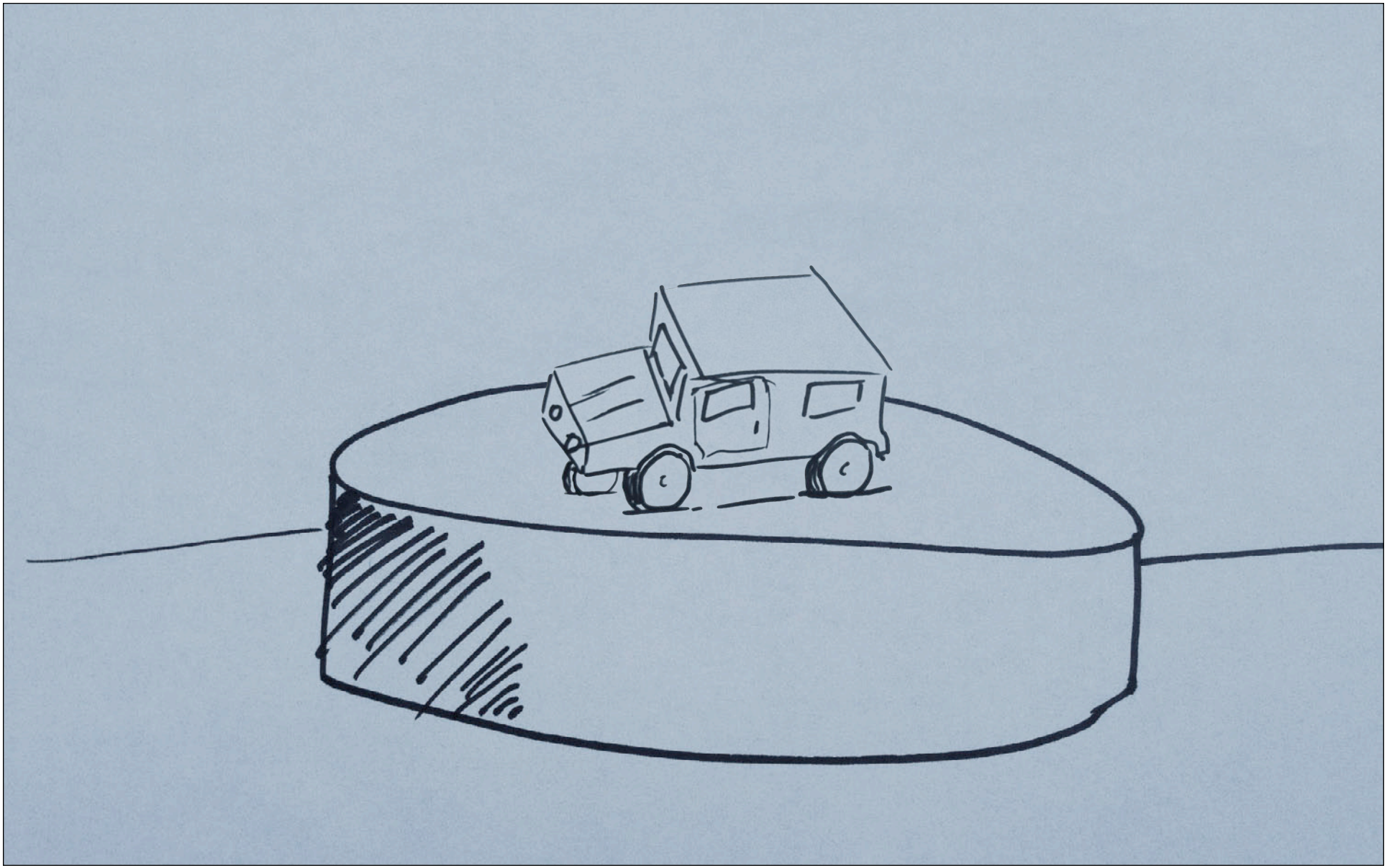
Eliza Block

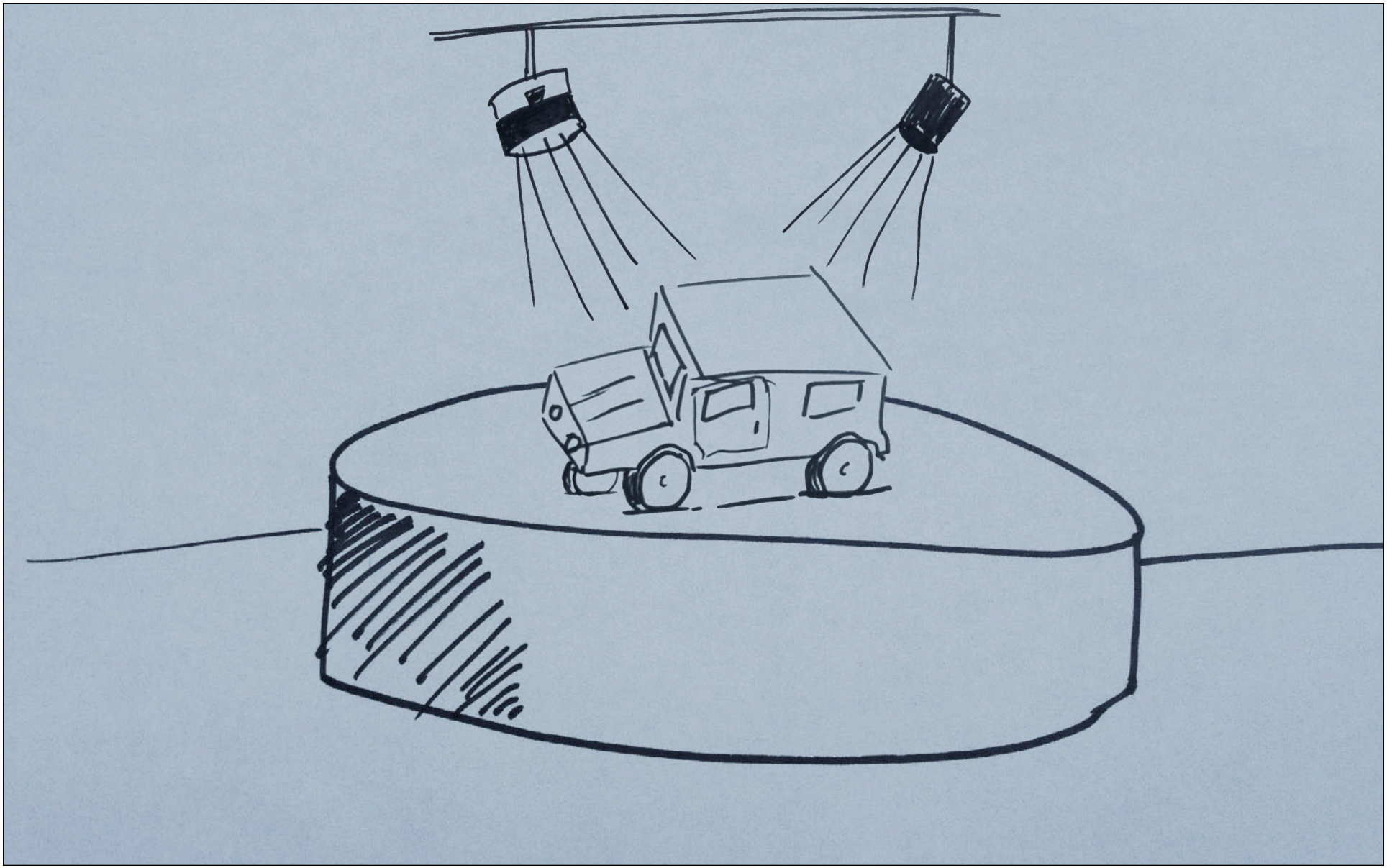
Integrating UIScrollView and OpenGL

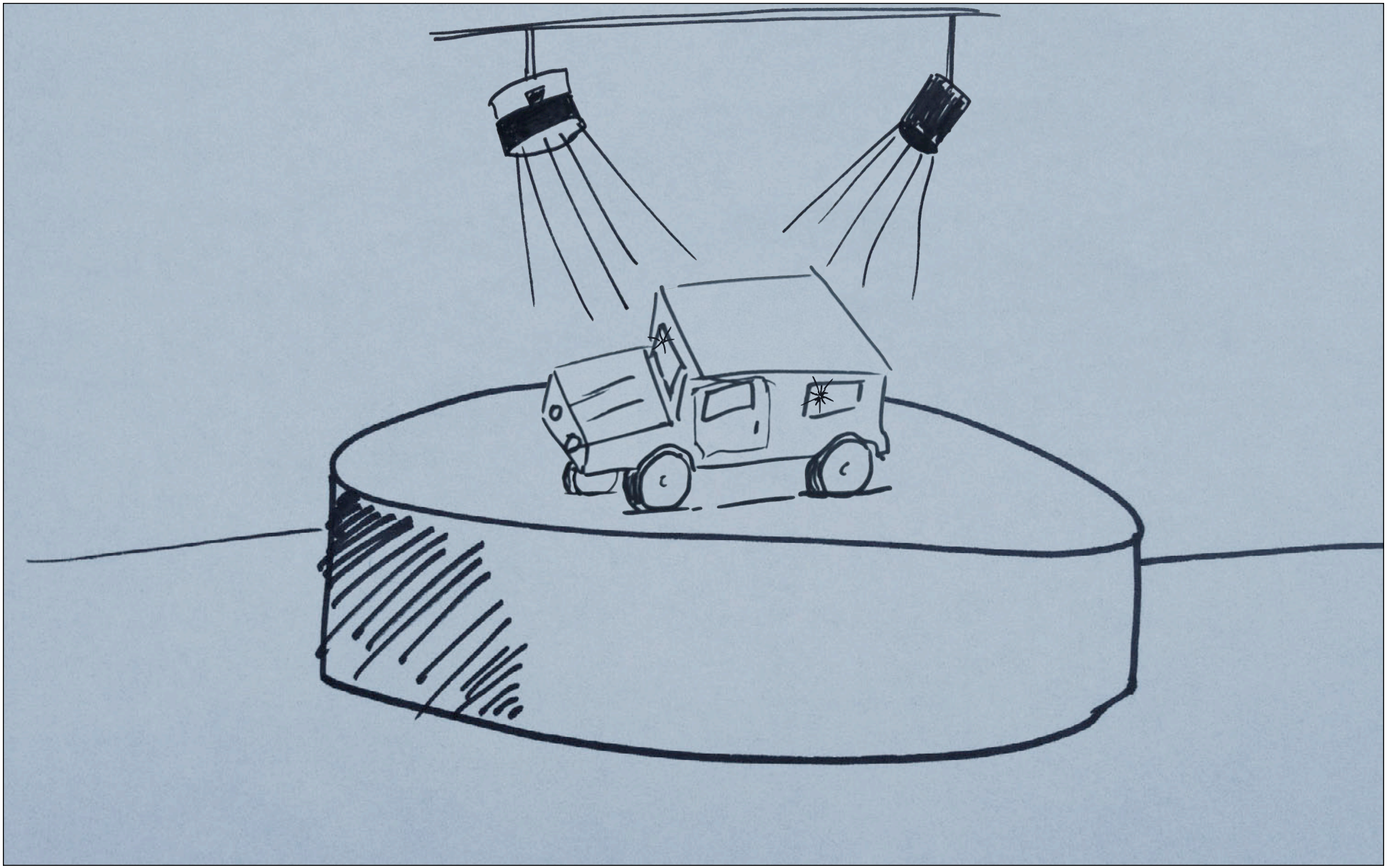


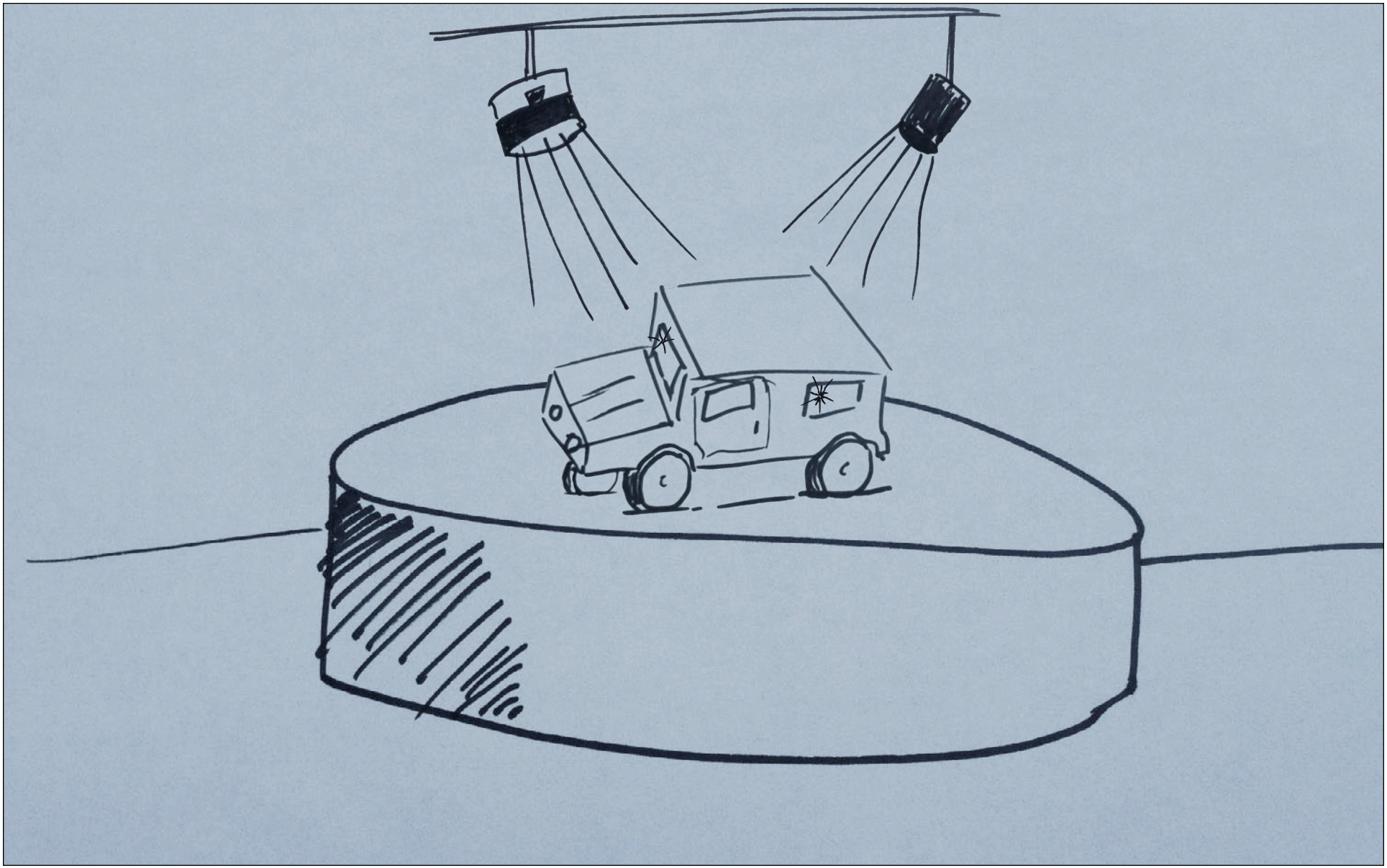


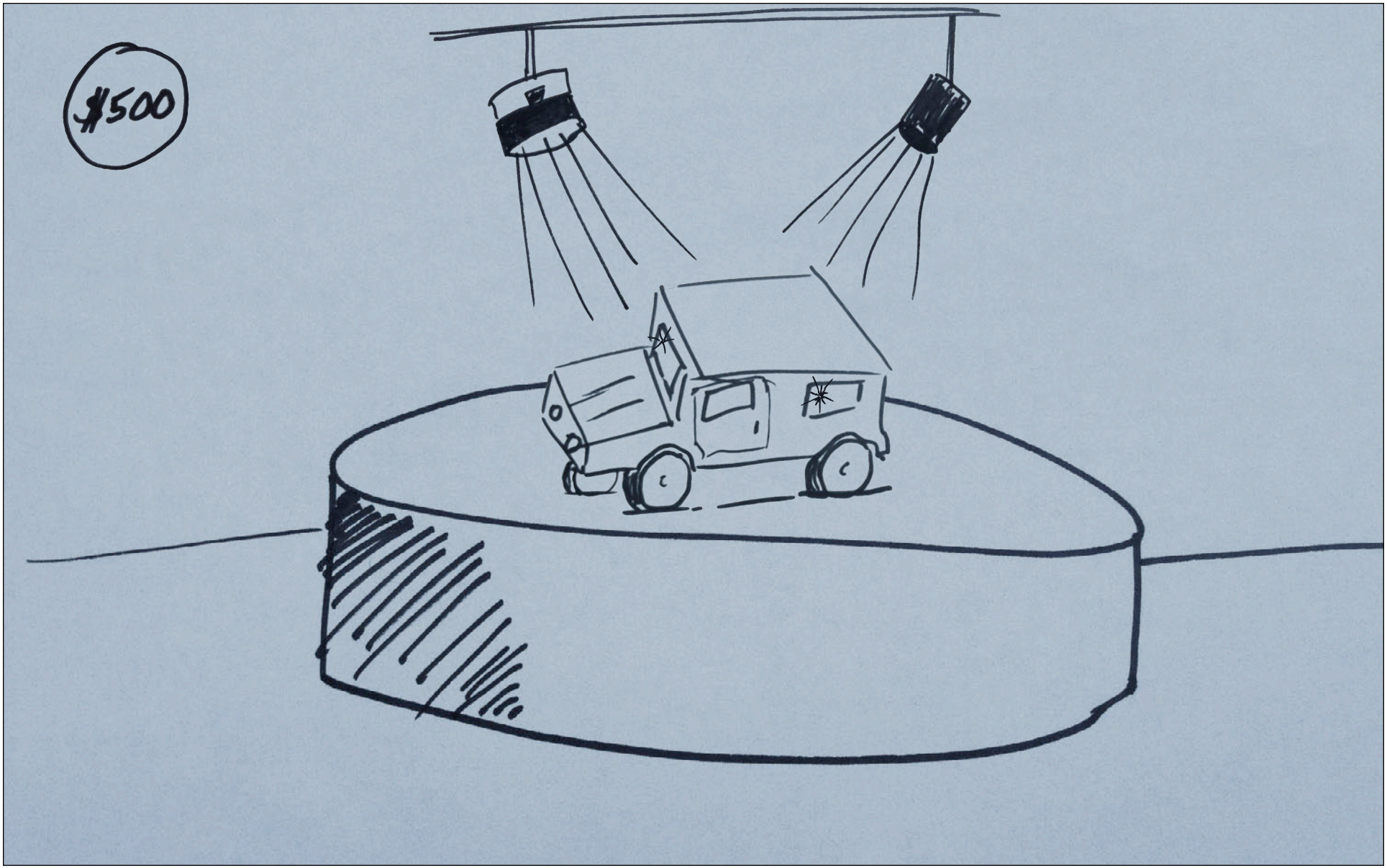


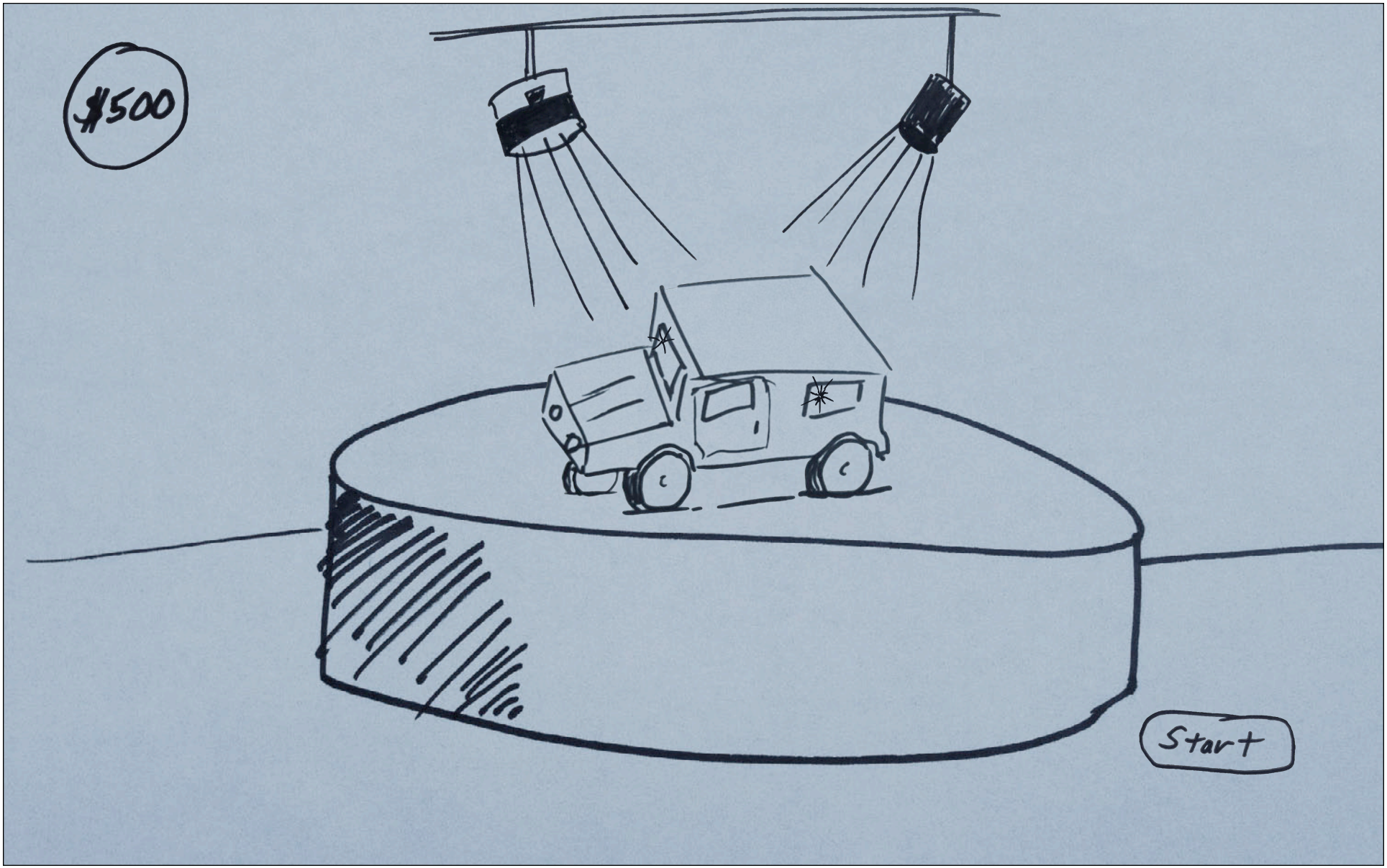


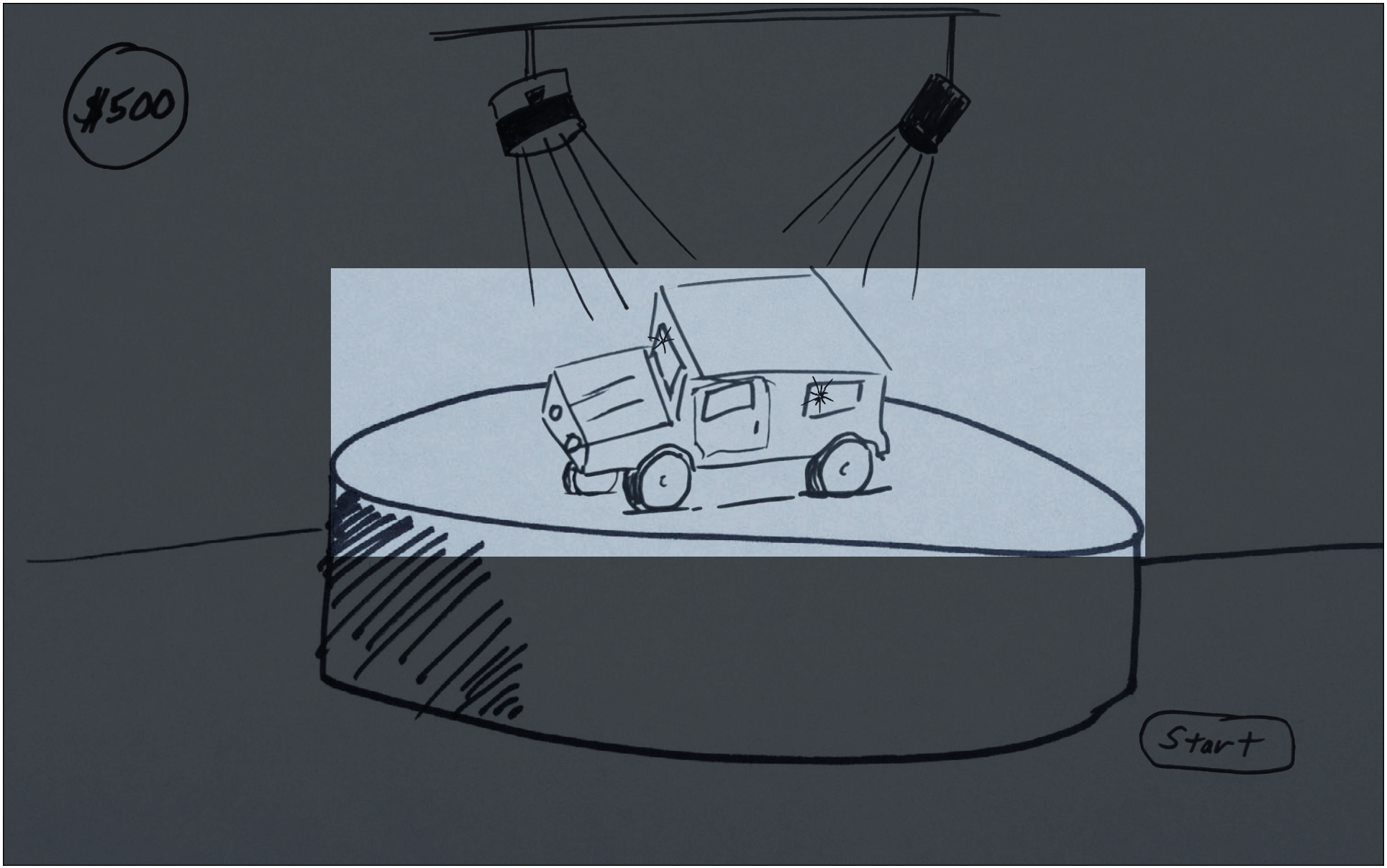







$500


$500
Start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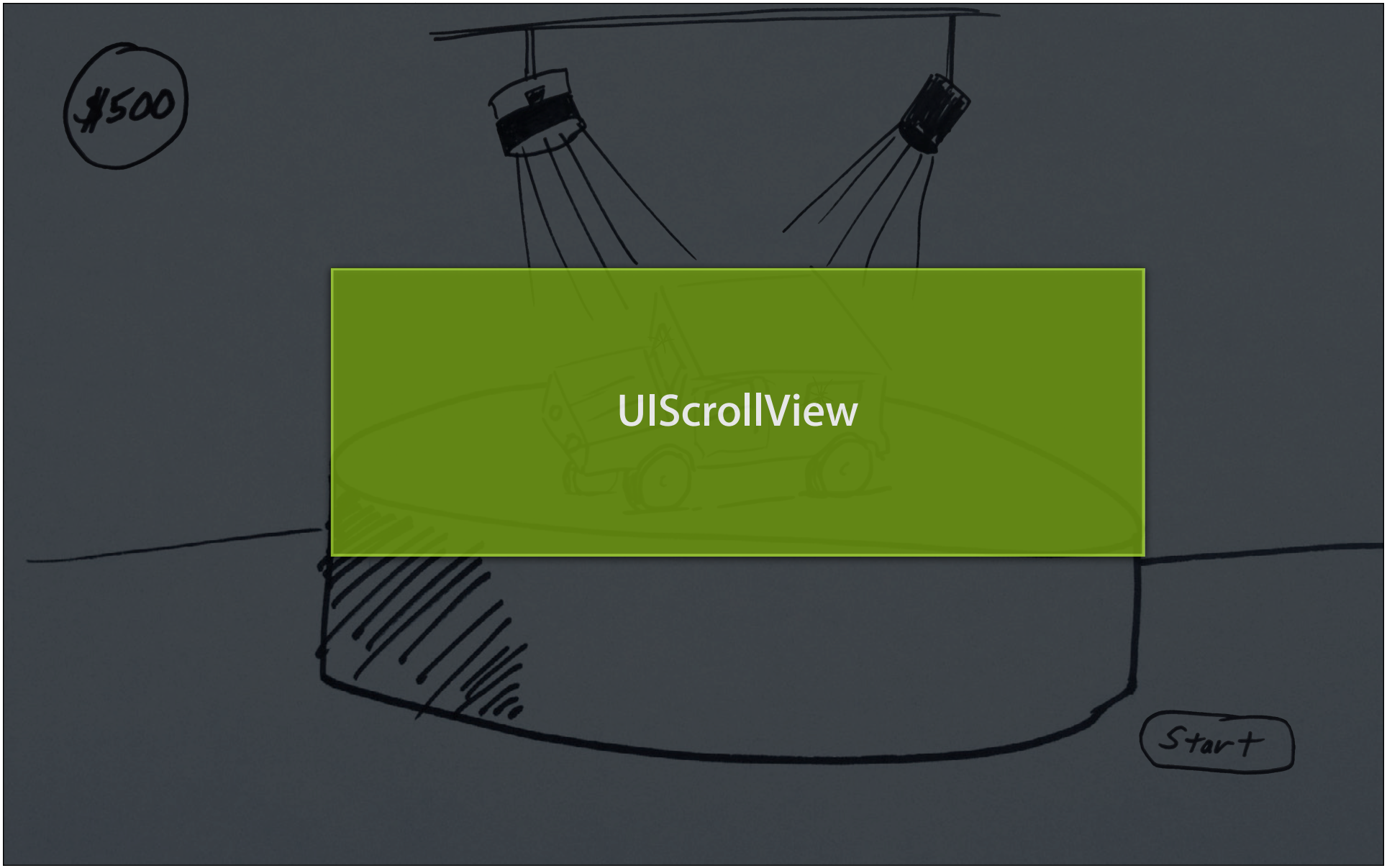
Start


$500
UIScrollView
Start

Demo

Eliza Block

Run Loop Modes

Common surprises

Run Loop Modes

Common surprises

```
[NSTimer scheduledTimerWithTimeInterval:1.0
                                 target:self
                               selector:@selector(handleTimer:)
                               userInfo:nil
                                repeats:NO];
```

Run Loop Modes

Common surprises

```
[NSTimer scheduledTimerWithTimeInterval:1.0
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NSTimer *timer = [NSTimer timerWithInterval:1.0
                                     target:self
                                   selector:@selector(handleTimer:)
                                   userInfo:nil
                                    repeats:NO];
```

Run Loop Modes

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```
[NSTimer scheduledTimerWithTimeInterval:1.0
                                 target:self
                               selector:@selector(handleTimer:)
                               userInfo:nil
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```

```
NSTimer *timer = [NSTimer timerWithInterval:1.0
                                     target:self
                                   selector:@selector(handleTimer:)
                                   userInfo:nil
                                    repeats:NO];
[[NSRunLoop mainRunLoop] addTimer:timer forMode:NSCommonRunLoopModes];
```

Run Loop Modes

Common surprises

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Common surprises

```
[self performSelector:@selector(performDelayedWork)
           withObject:nil
           afterDelay:1.0];
```

Run Loop Modes

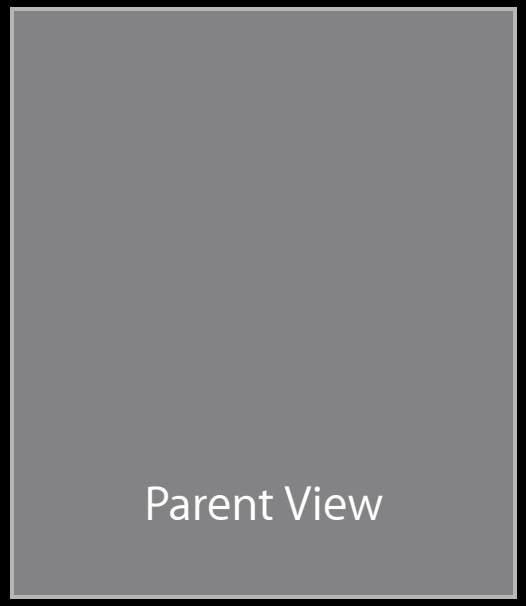
Common surprises

```
[self performSelector:@selector(performDelayedWork)
           withObject:nil
           afterDelay:1.0];
```

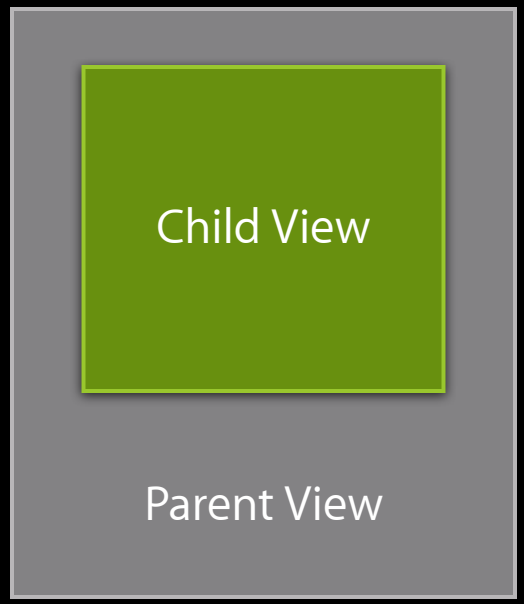
```
[self performSelector:@selector(performDelayedWork)
           withObject:nil
           afterDelay:1.0
              inModes:@[NSCommonRunLoopModes]];
```

UIResponder and Event Delivery

UIResponder and Event Delivery



UIResponder and Event Delivery



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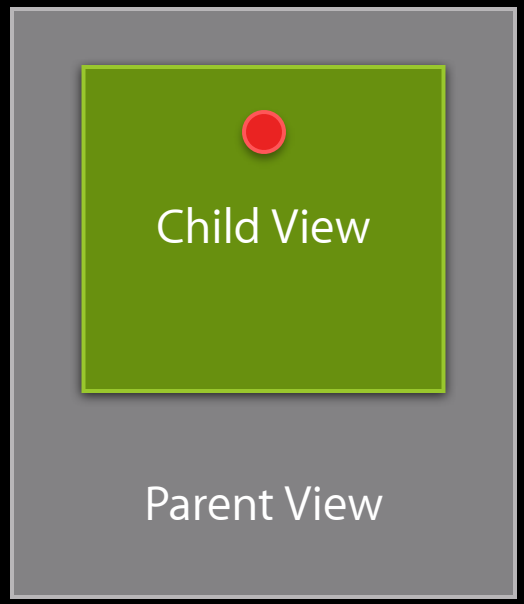
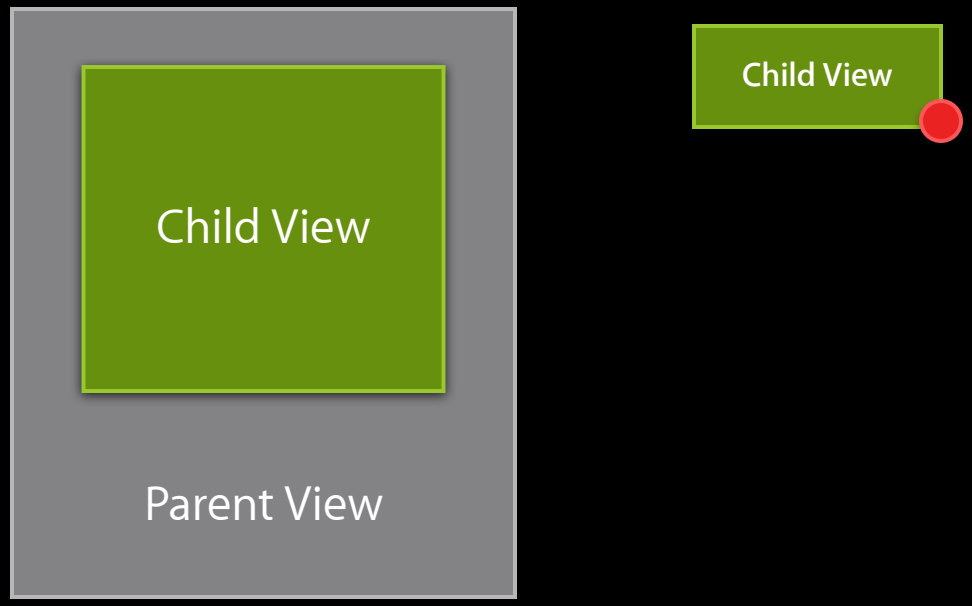


UIResponder and Event Delivery



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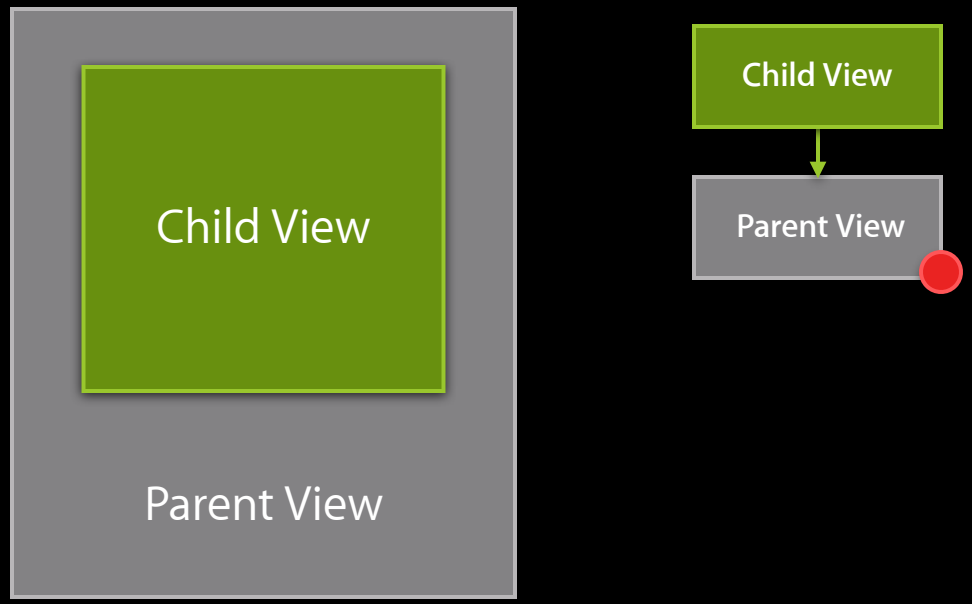

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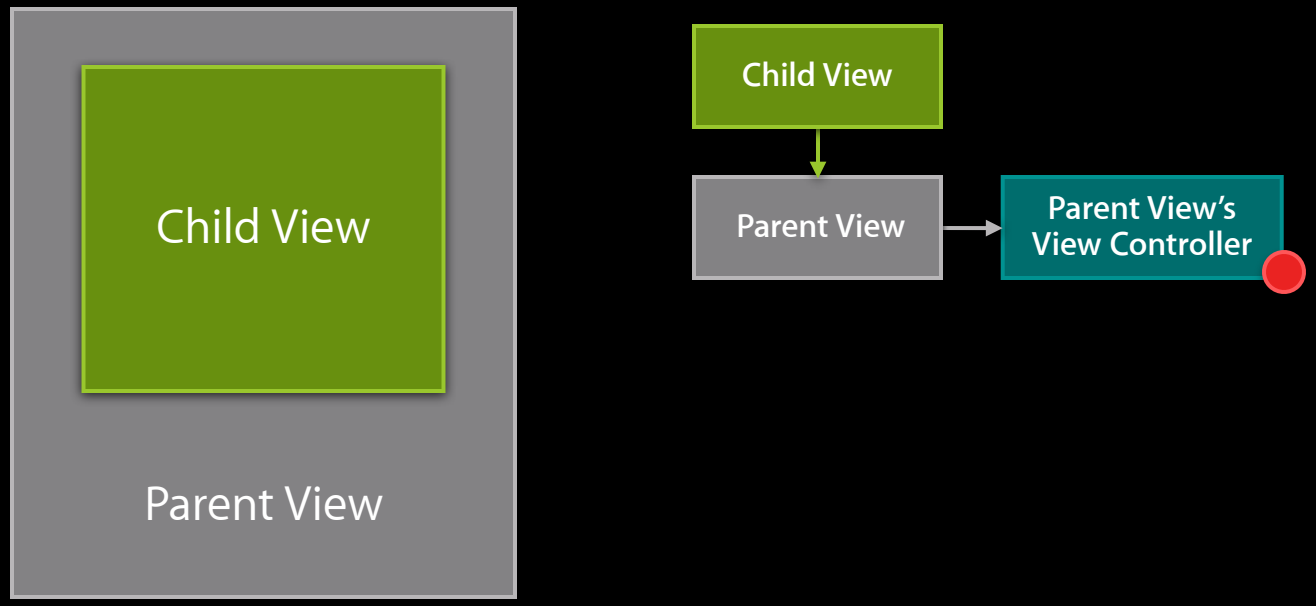

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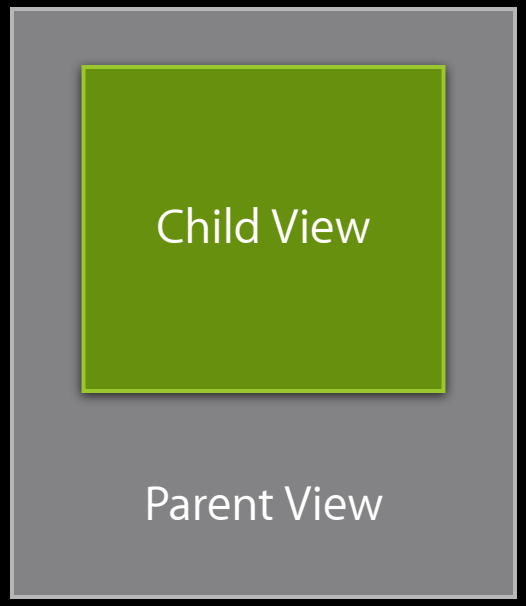
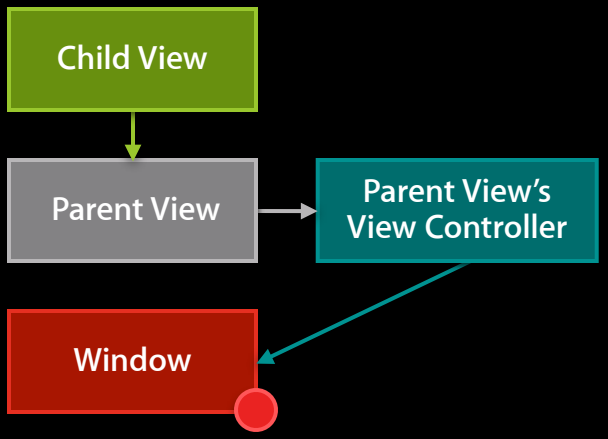
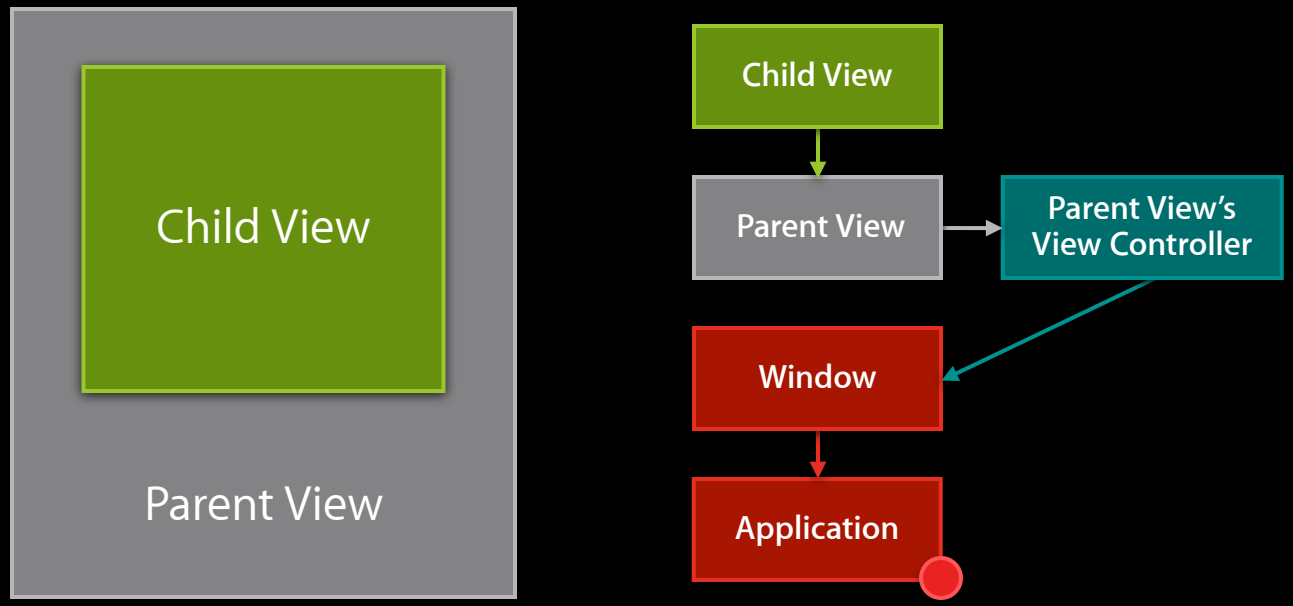
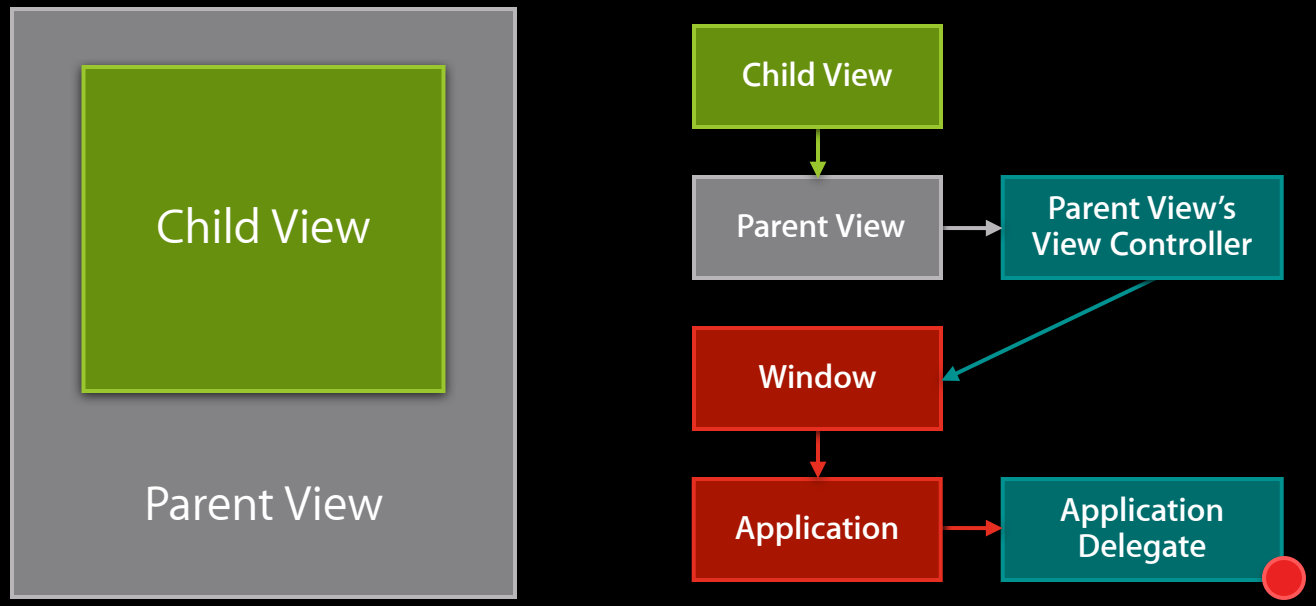




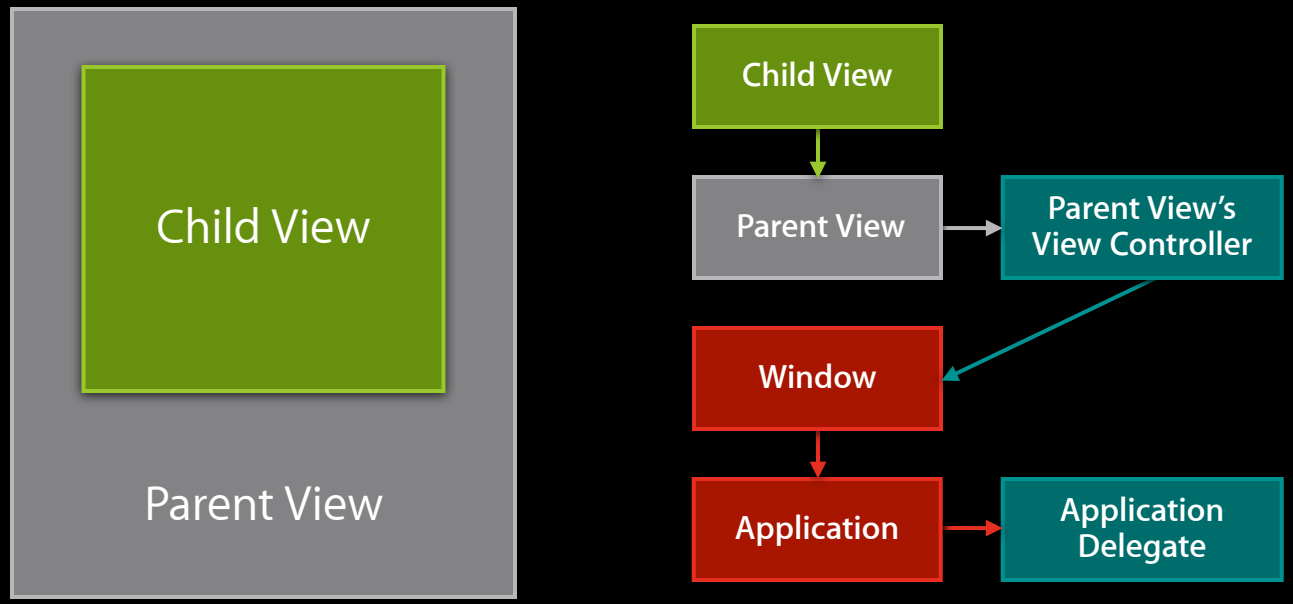
UIResponder and Event Delivery



UIResponder and Event Delivery



UIResponder and Event Delivery



UIResponder and Event Delivery

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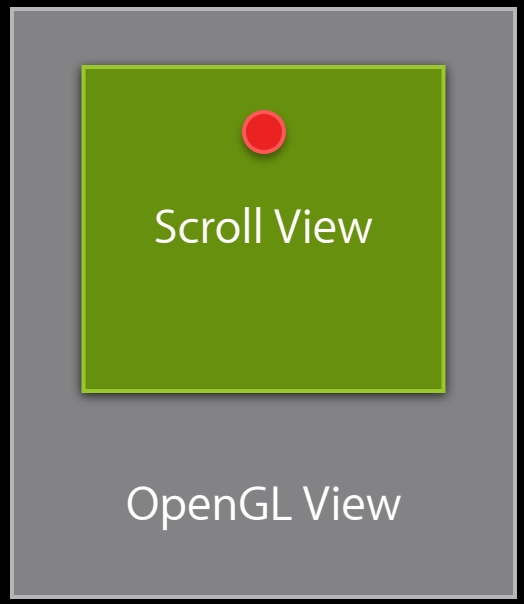

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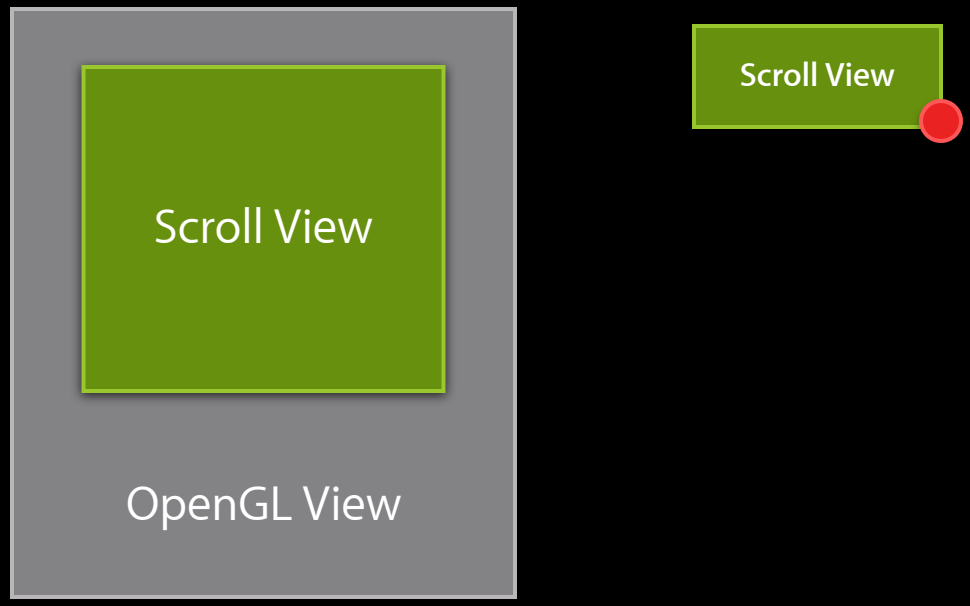

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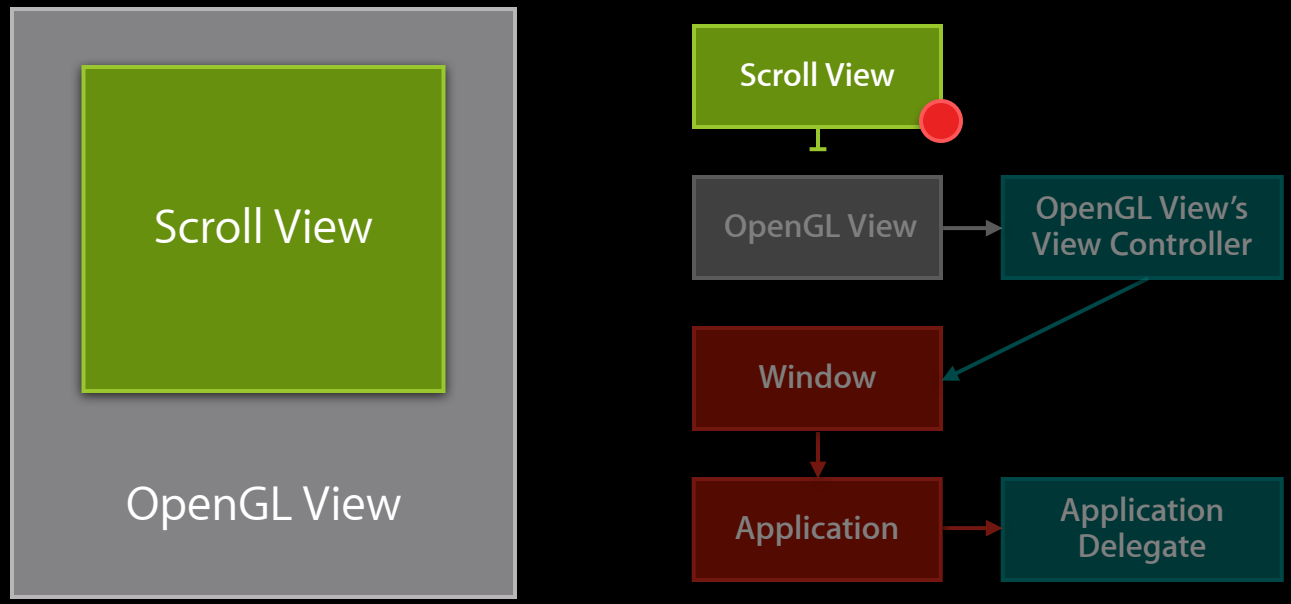
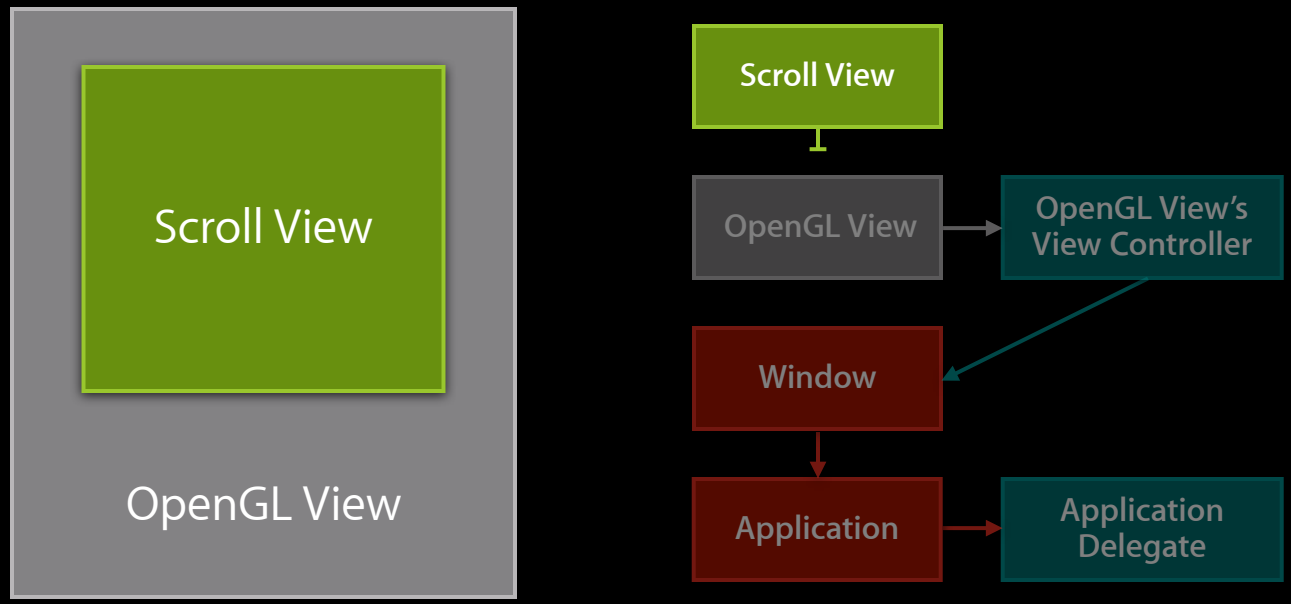


UIResponder and Event Delivery



UIResponder and Event Delivery

How not to do it

UIResponder and Event Delivery

How not to do it

```
- (void)touchesBegan:(NSSet *)touches withEvent:(UIEvent *)event
{
    [[self nextResponder] touchesBegan:touches withEvent:event];
}
```

UIResponder and Event Delivery

How not to do it

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UIResponder and Event Delivery

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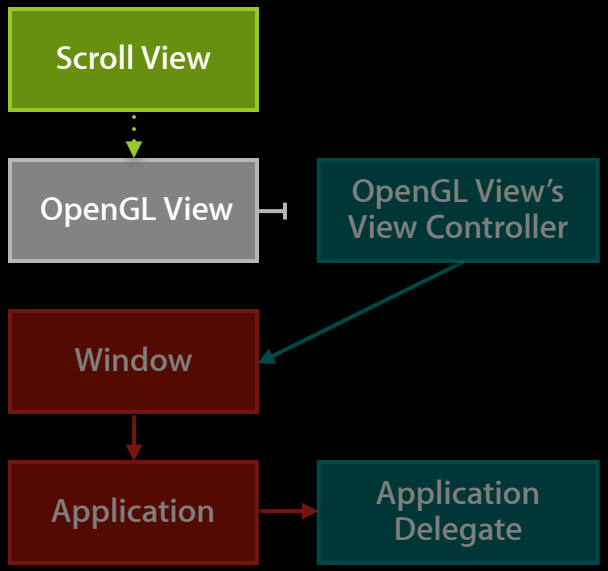
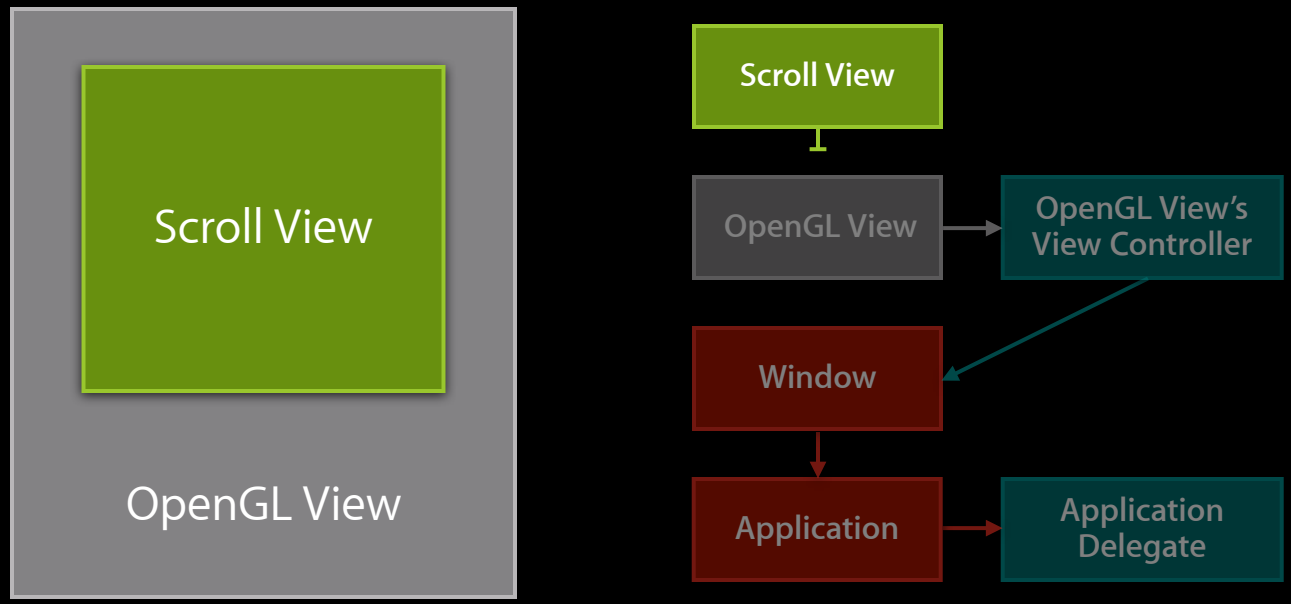
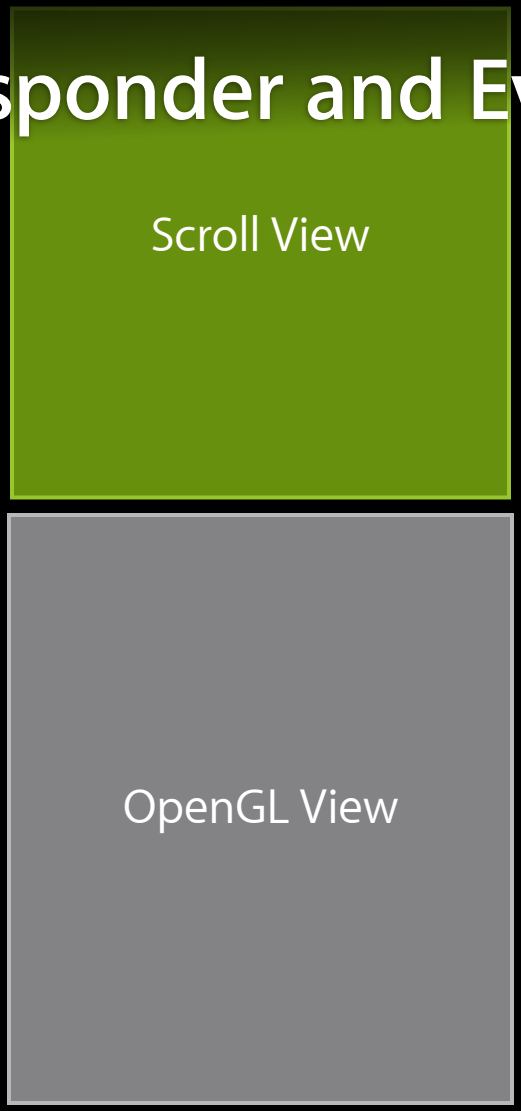
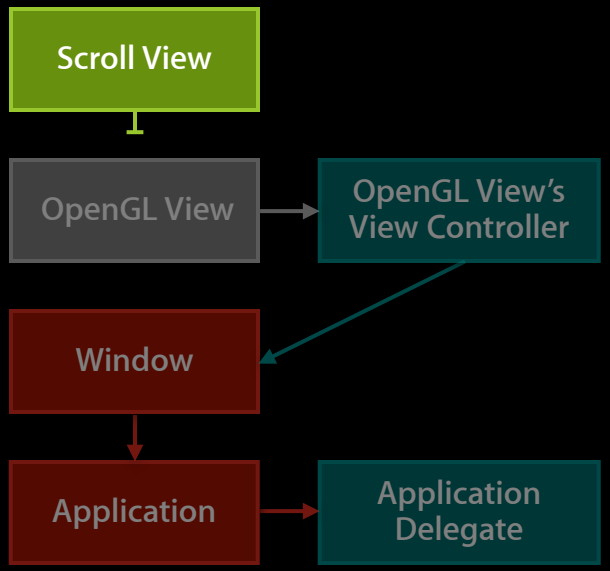


UIResponder and Event Delivery

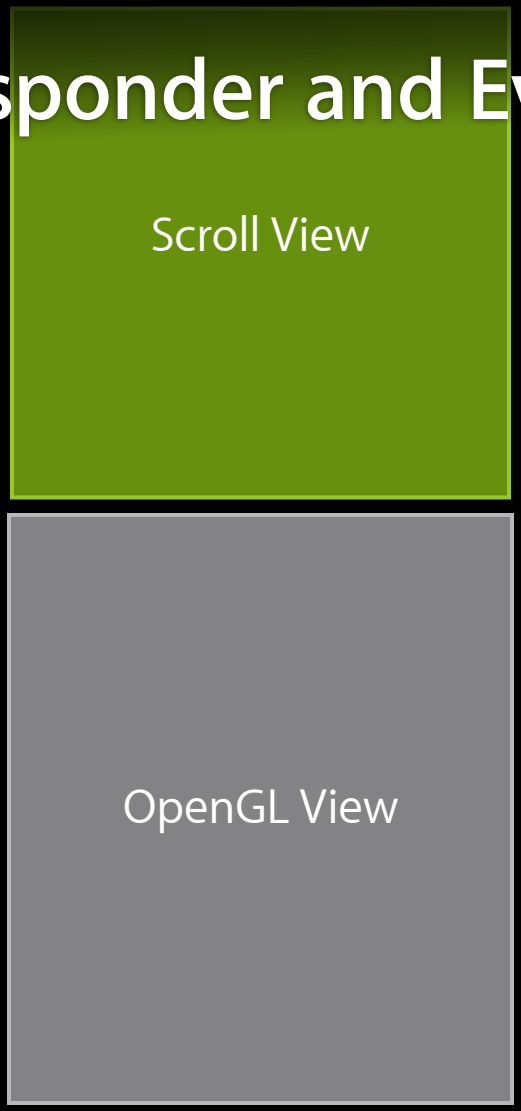


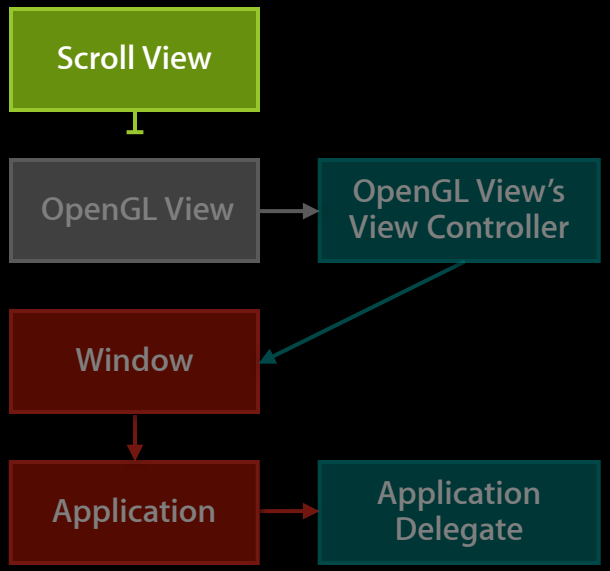
UIResponder and Event Delivery





UIResponder and Event Delivery





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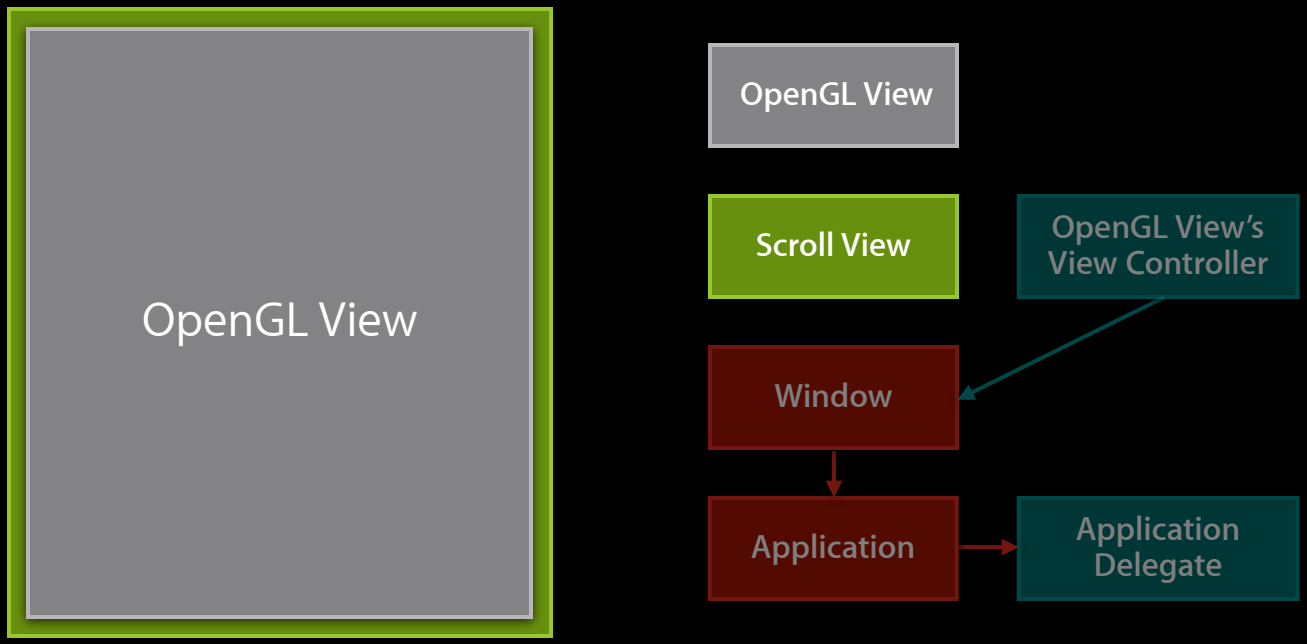

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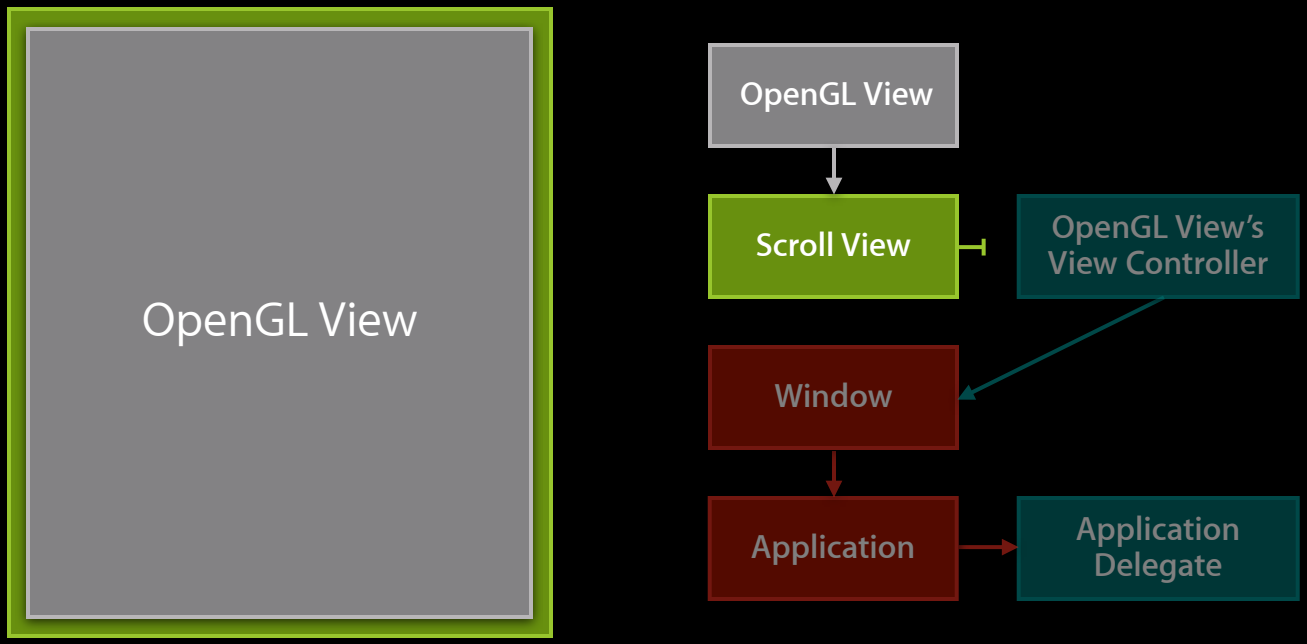
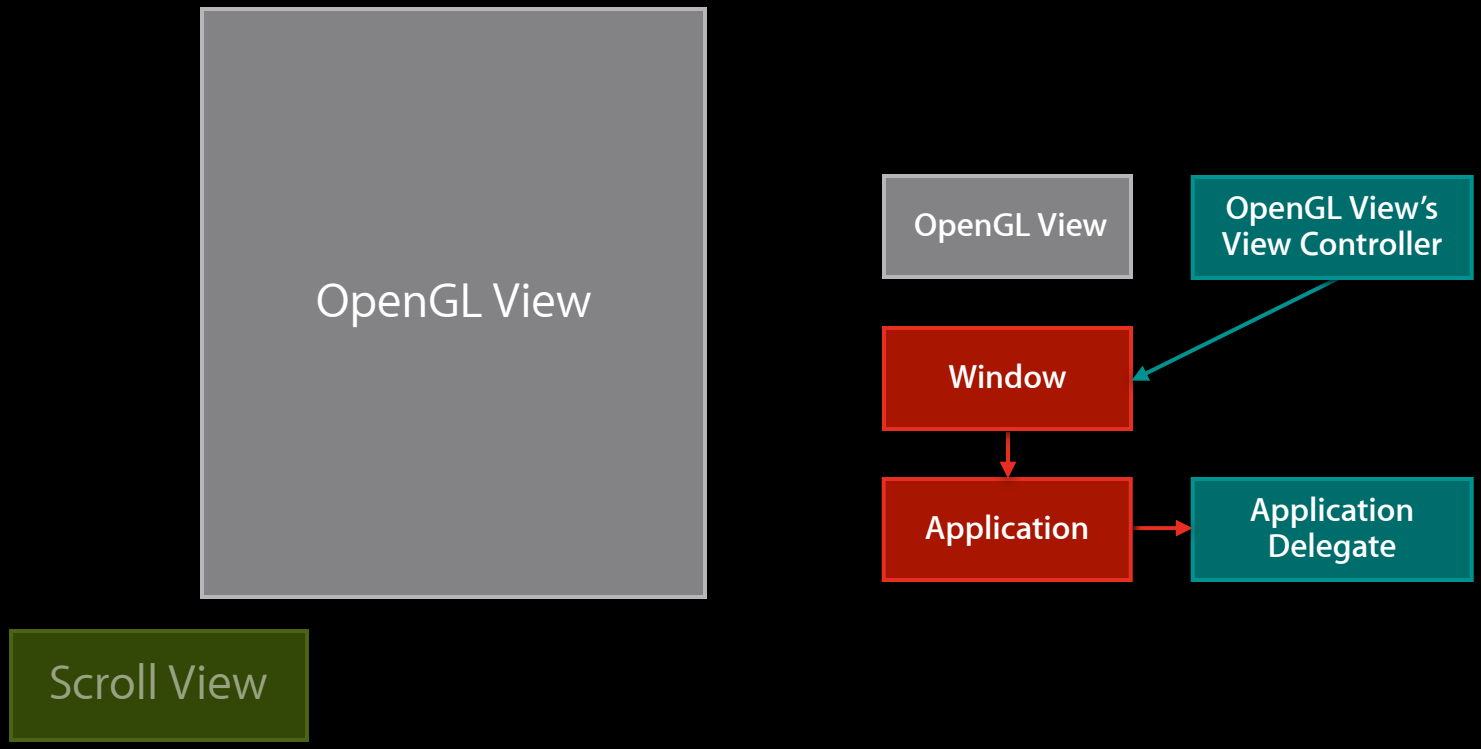
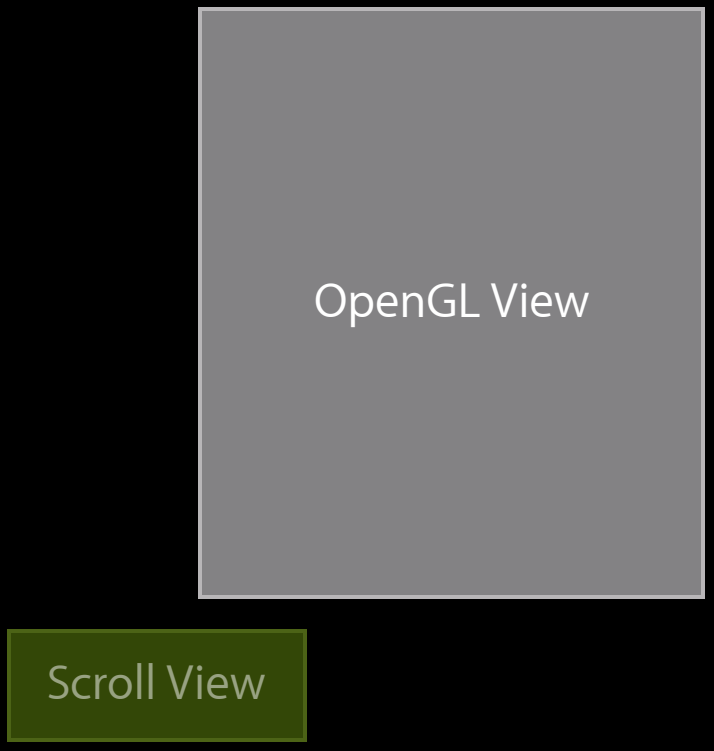
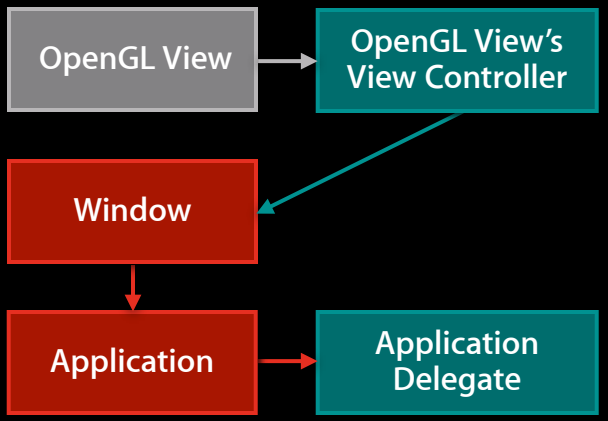


UIResponder and Event Delivery

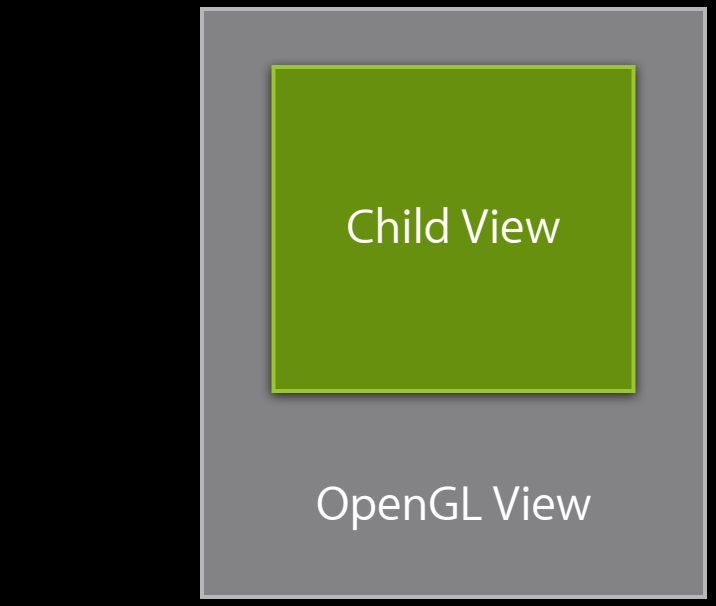


UIResponder and Event Delivery

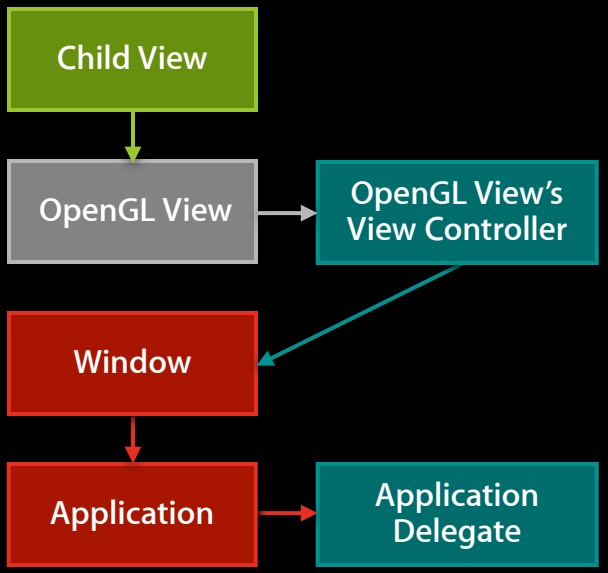




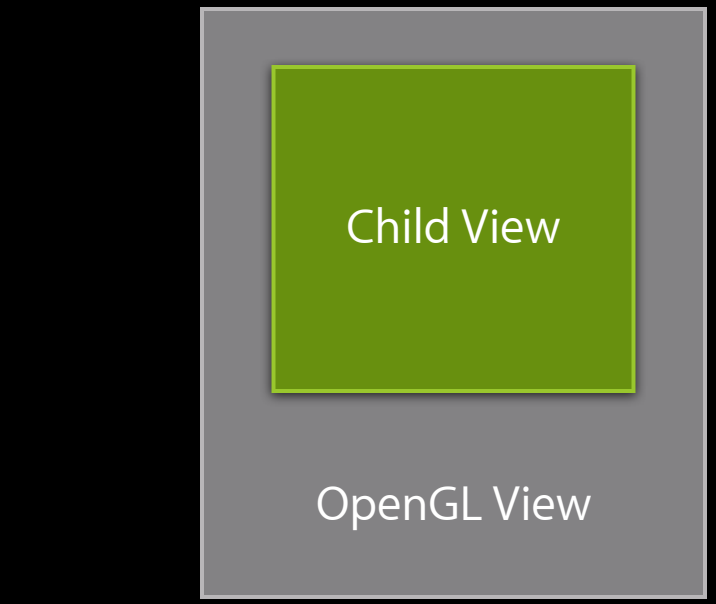
UIResponder and Event Delivery

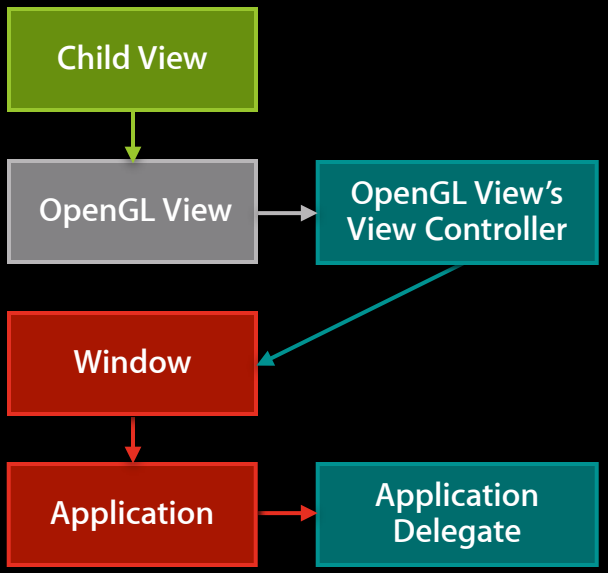


Scroll View

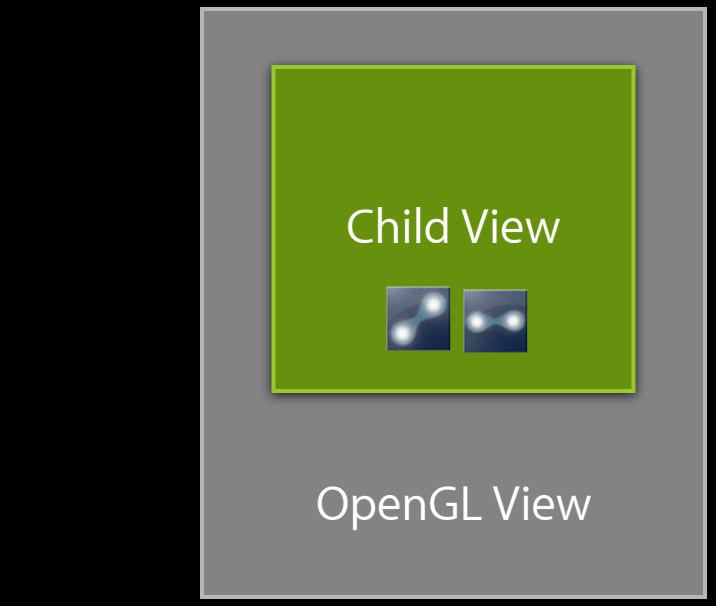


UIResponder and Event Delivery

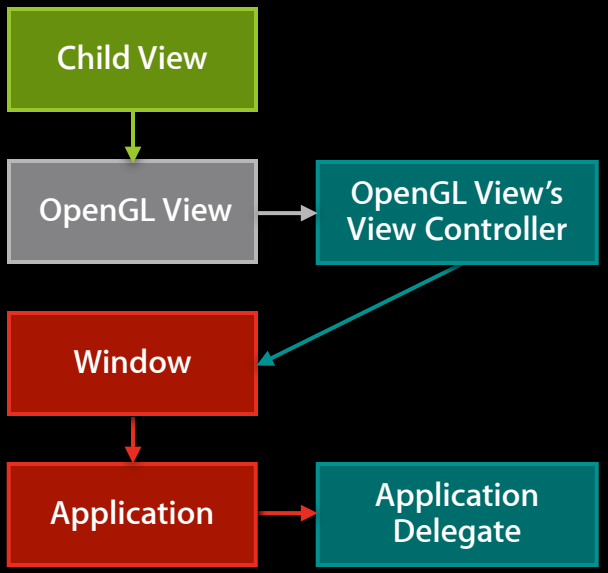




UIResponder and Event Delivery

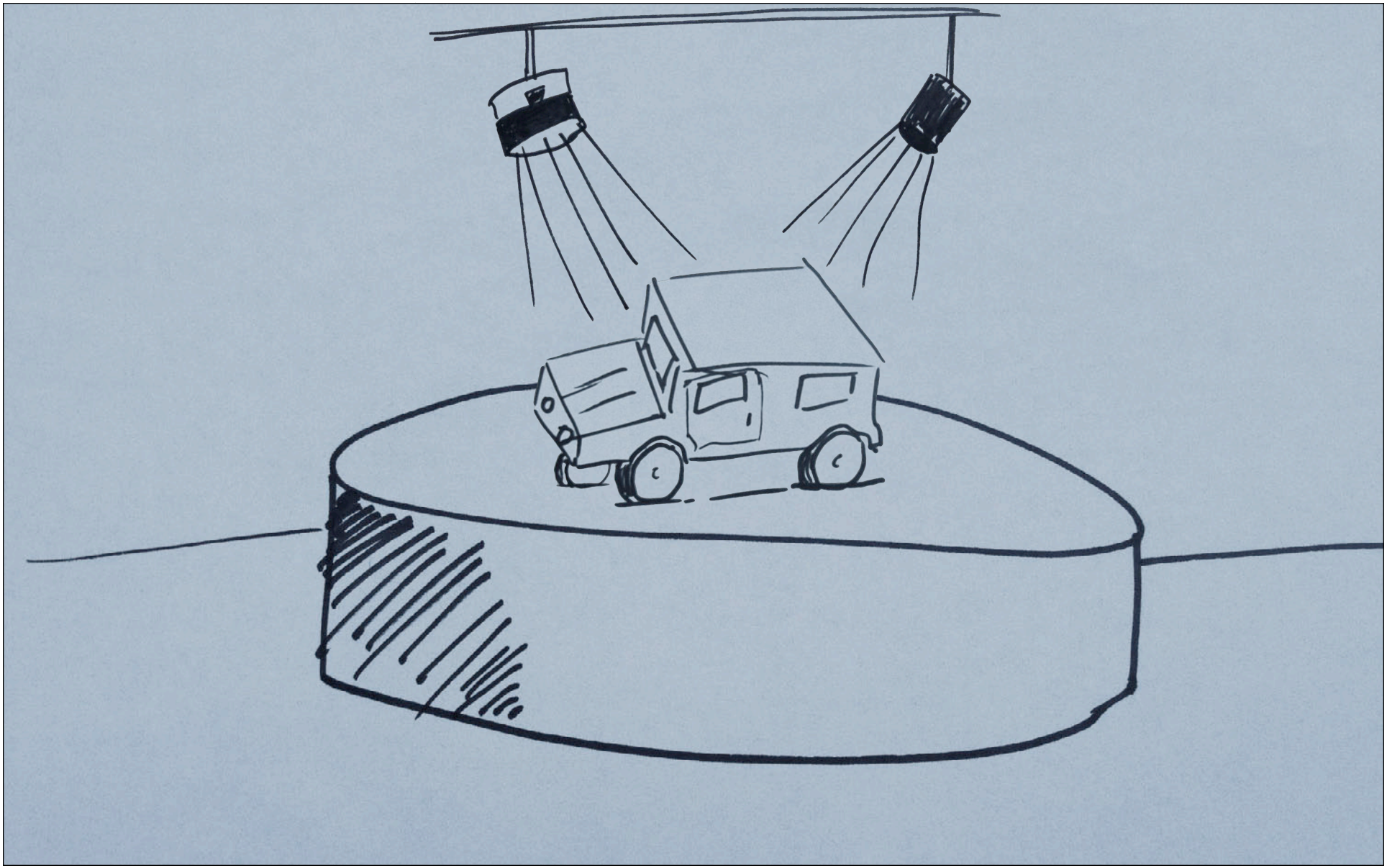


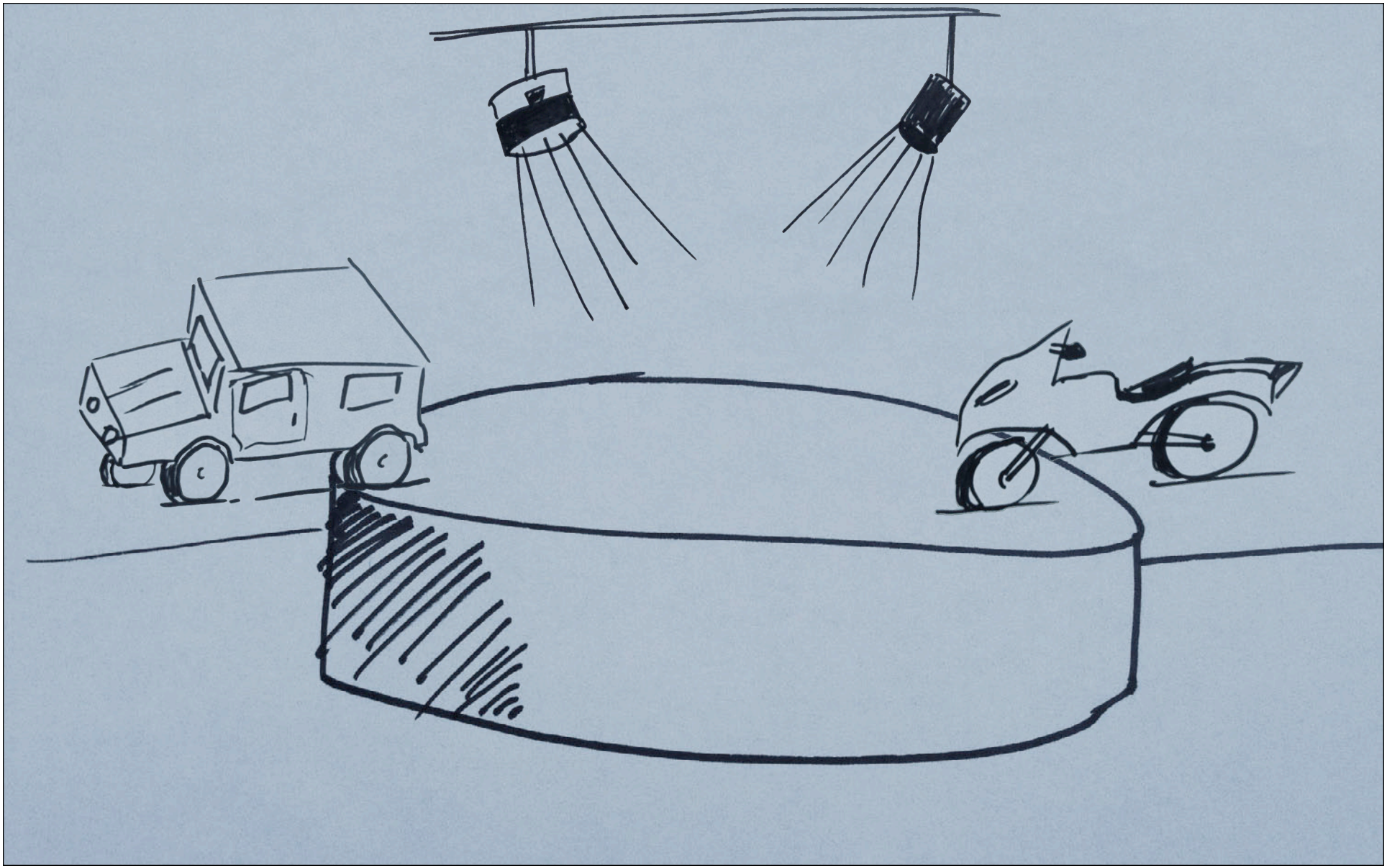
Scroll View

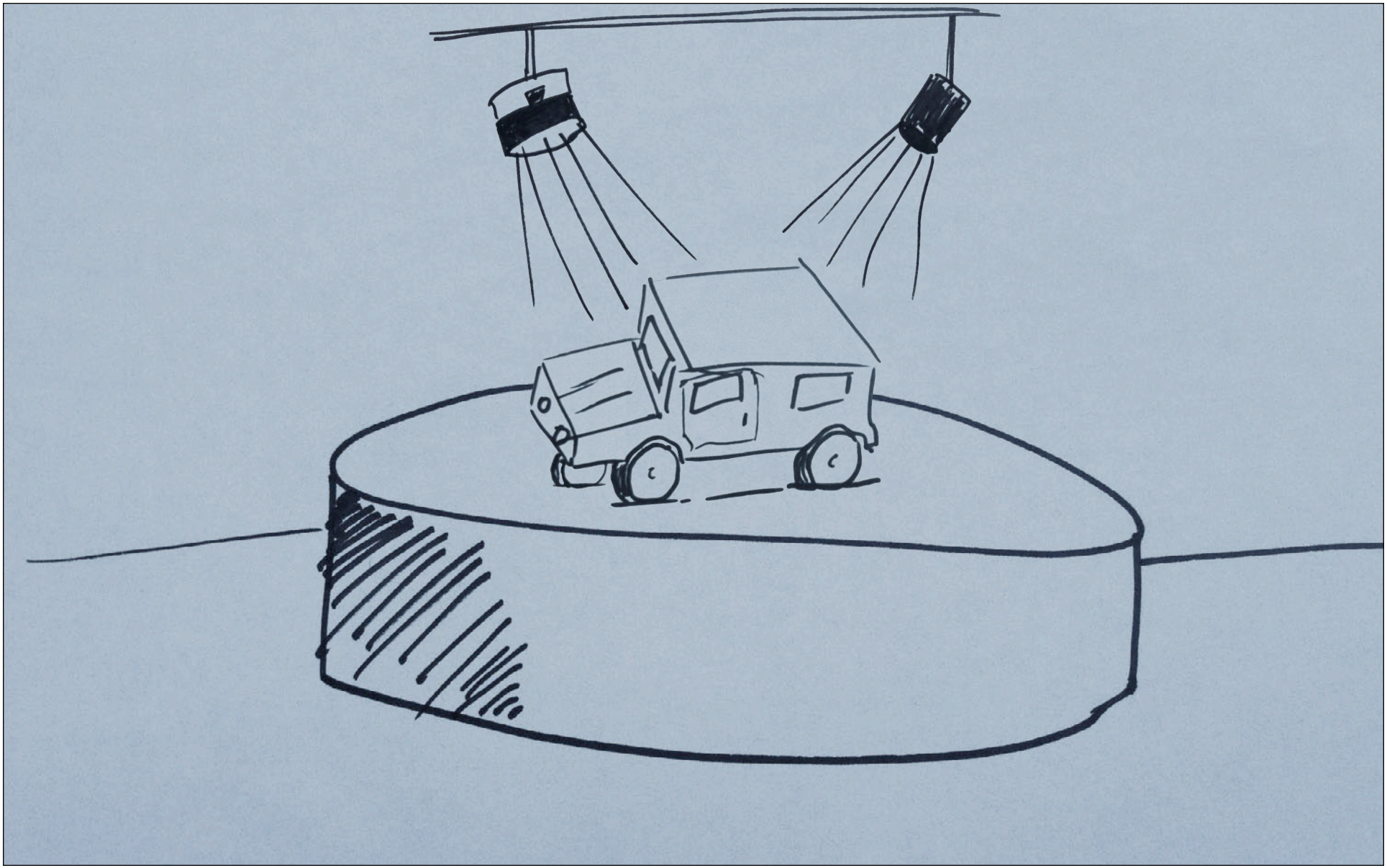


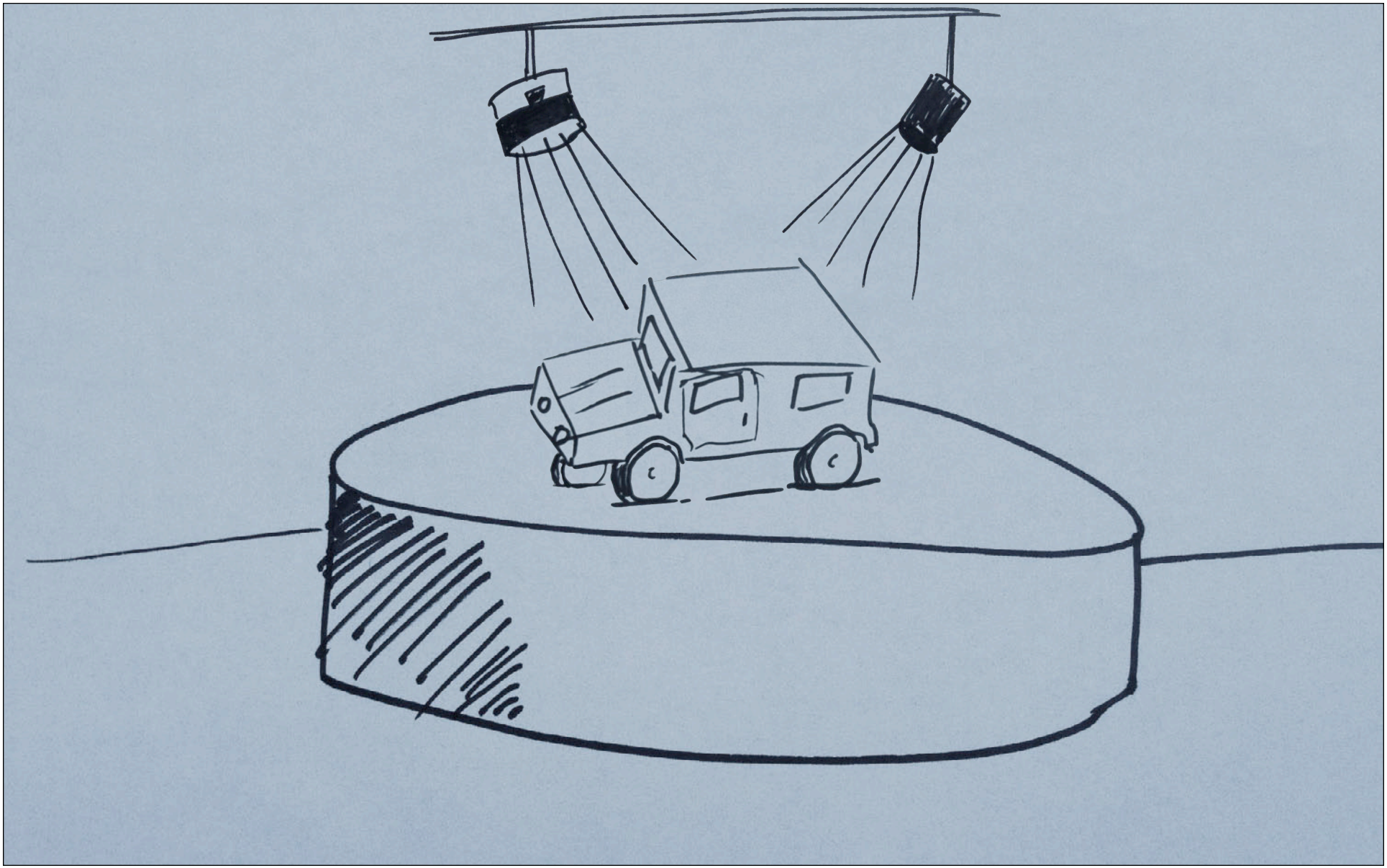
Demo

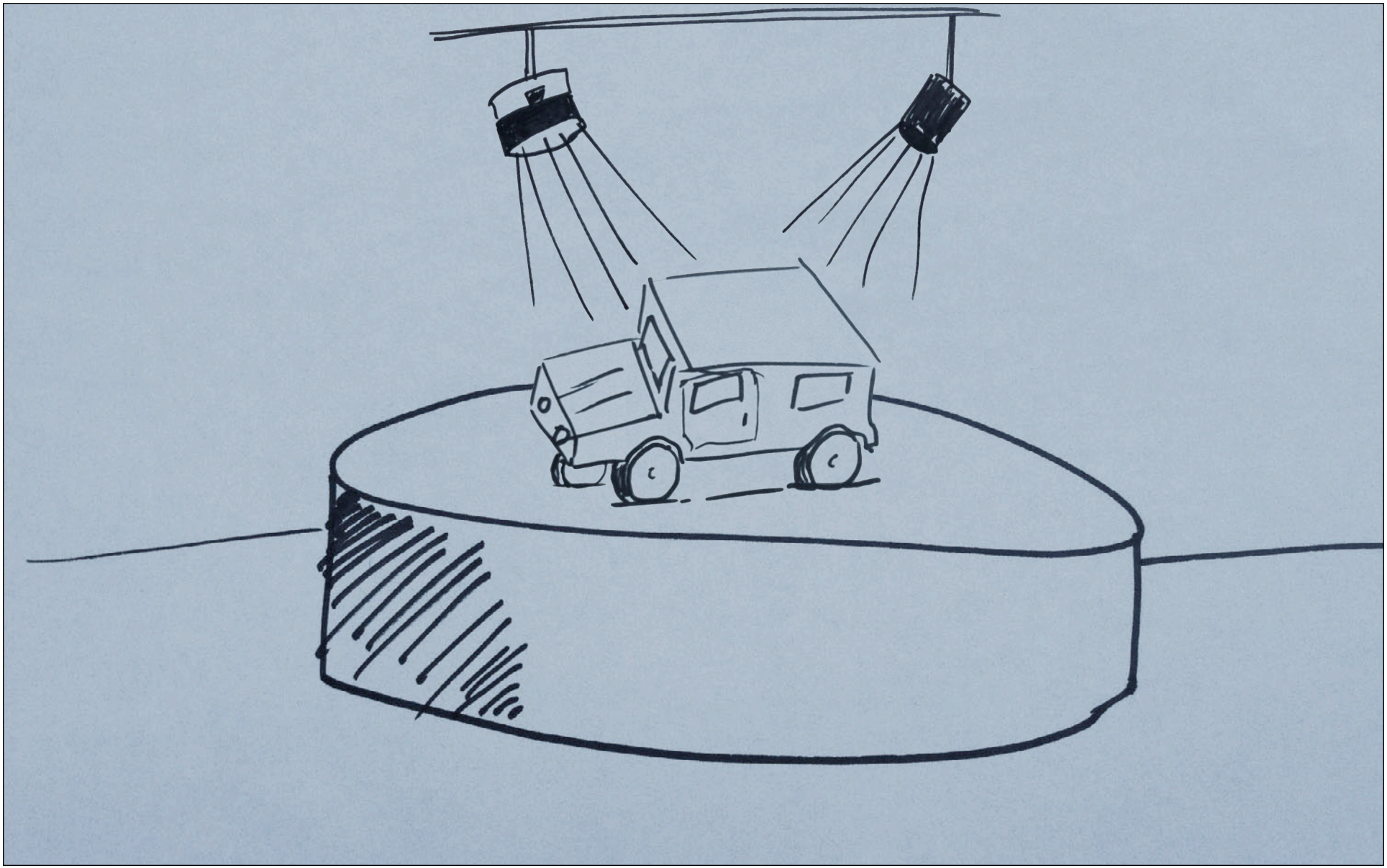
Eliza Block











Deceleration Targets

Deceleration Targets

```
- (void)scrollViewWillEndDragging:(UIScrollView *)scrollView
                     withVelocity:(CGPoint)velocity
              targetContentOffset:(inout CGPoint *)targetContentOffset
```

Deceleration Targets

```
- (void)scrollViewWillEndDragging:(UIScrollView *)scrollView
                     withVelocity:(CGPoint)velocity
              targetContentOffset:(inout CGPoint *)targetContentOffset
{
    *targetContentOffset = ClosestCarOffset(*targetContentOffset);
}
```

Demo

Eliza Block

More Information

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UI Frameworks Evangelist
behrens@apple.com

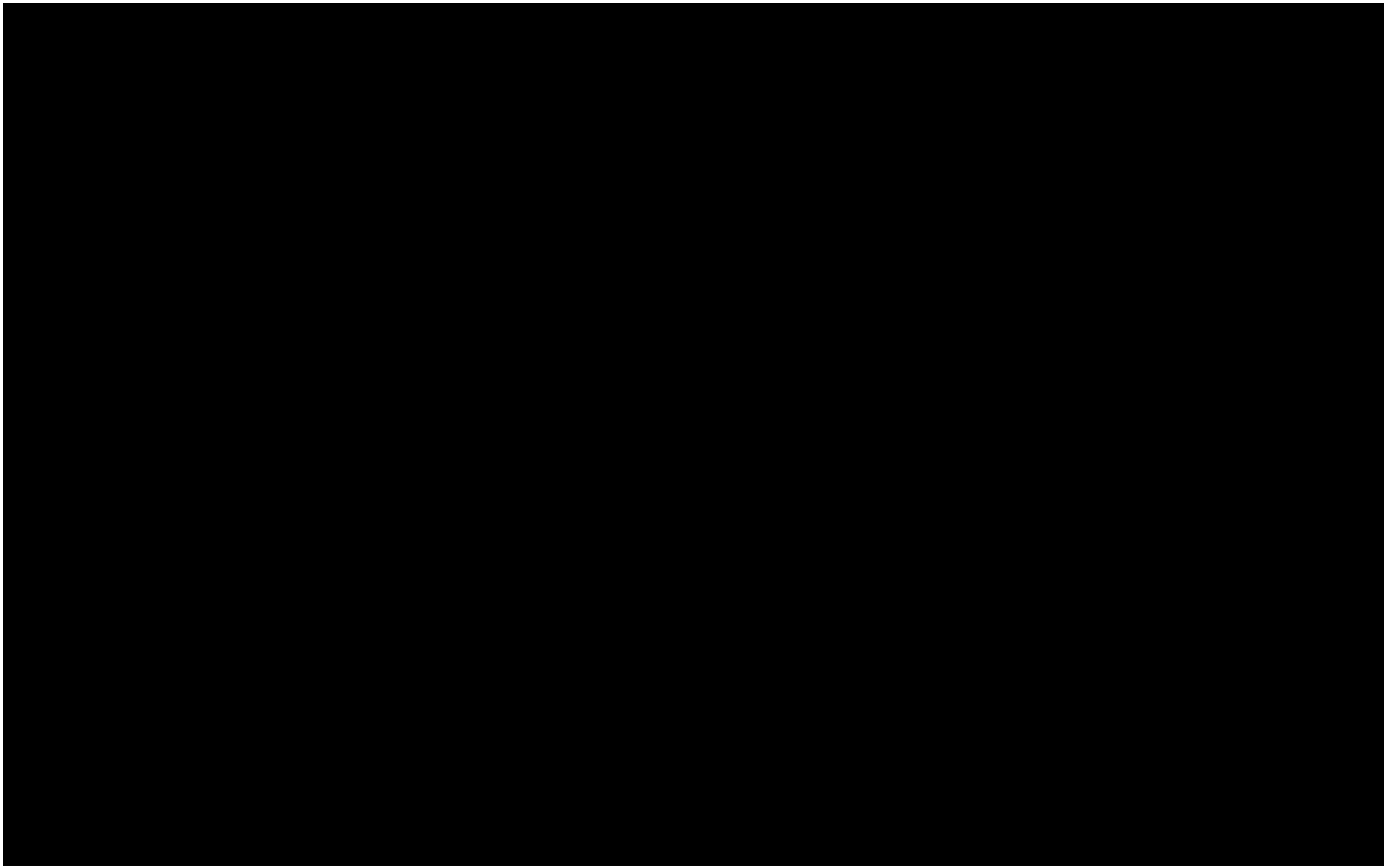
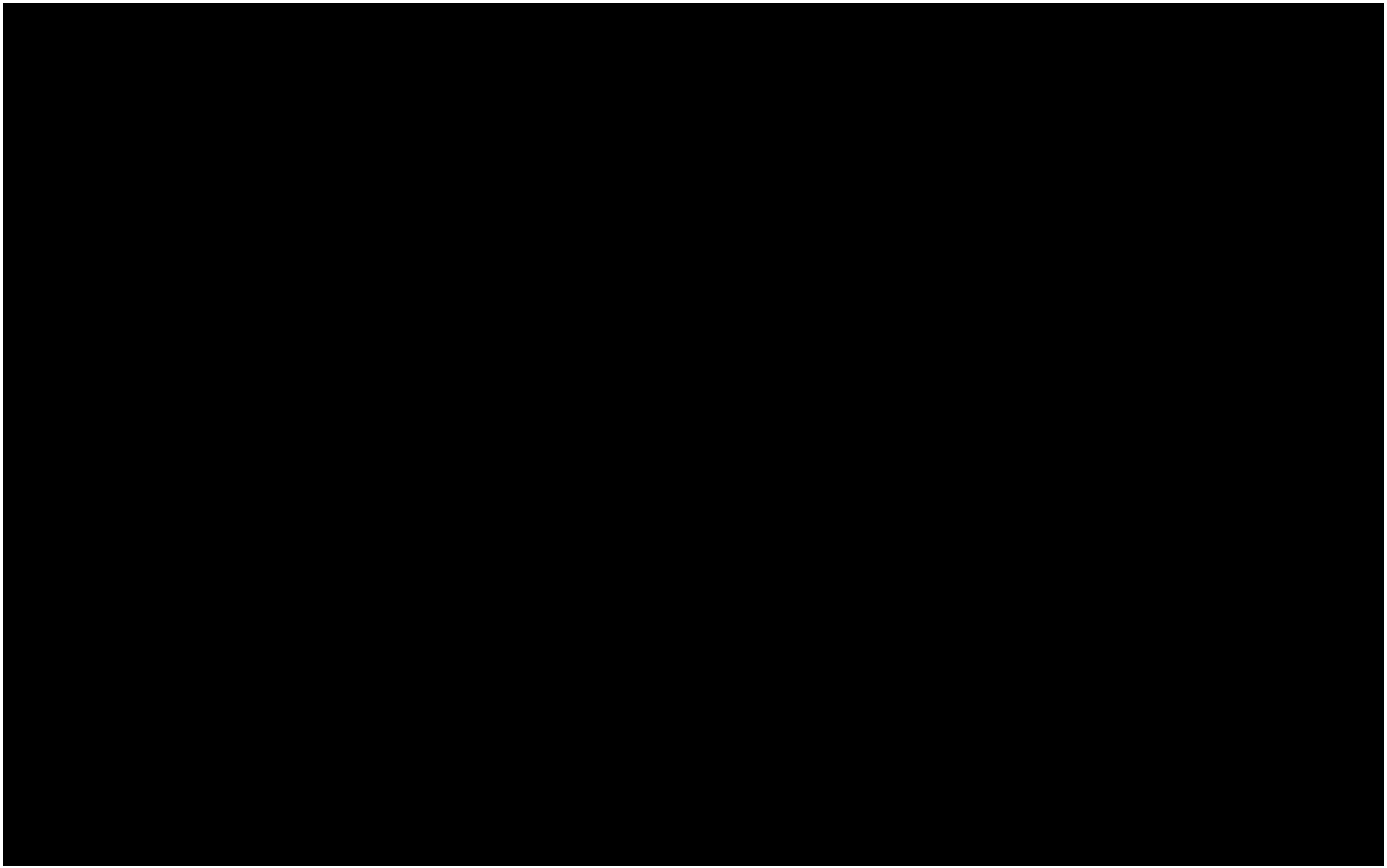
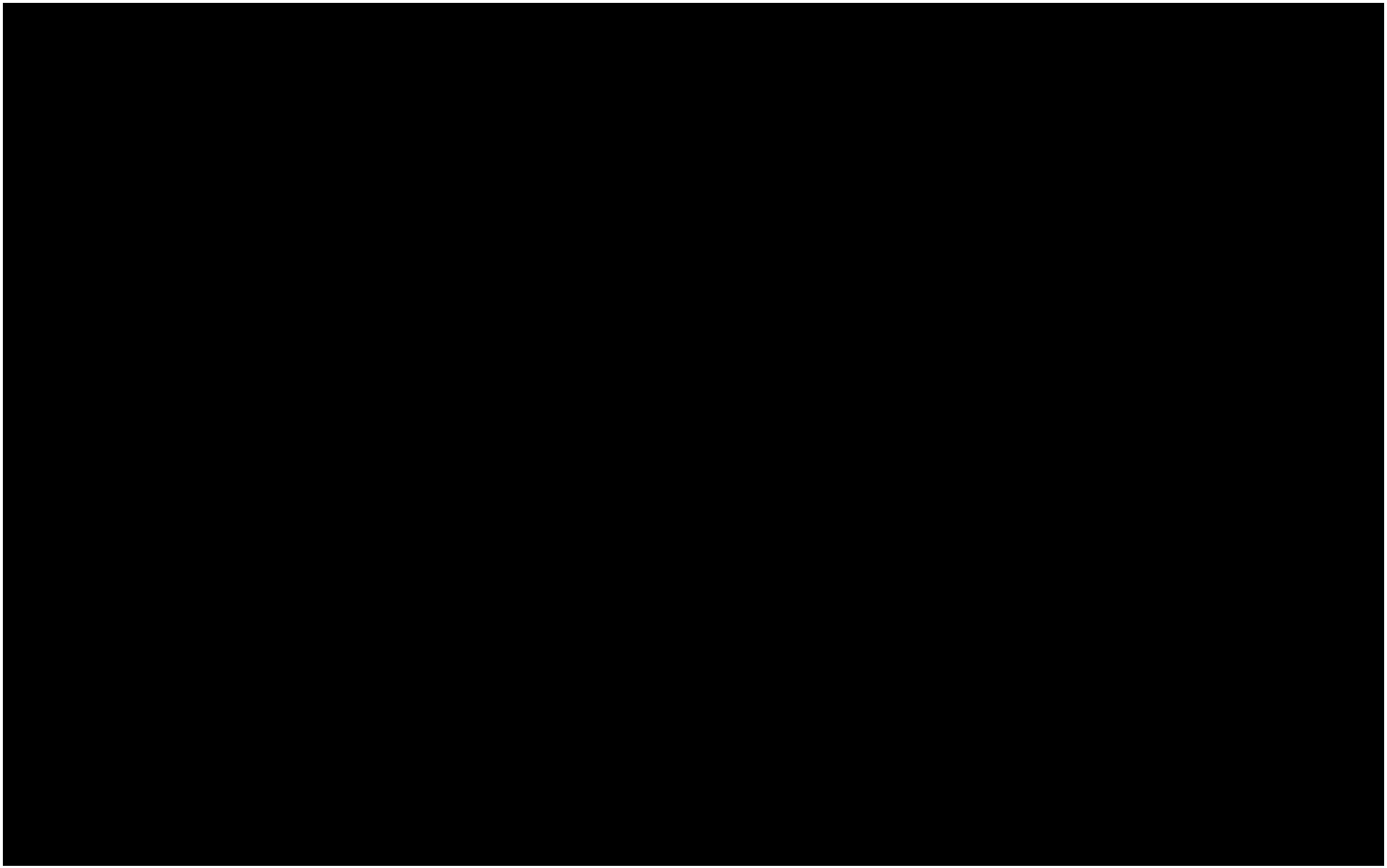
Documentation
Scroll View Programming Guide for iOS
http://developer.apple.com/library/ios/#documentation/WindowsViews/Conceptual/UIScrollView_pg

Apple Developer Forums
http://devforums.apple.com

Related Sessions

Introducing Collection Views	Marina Thursday 9:00AM
Building Advanced Gesture Recognizers	Marina Thursday 11:30AM

Labs

Scroll Views on iOS Lab	Essentials Lab A Thursday 9:00AM

WWDC2012