

Using Swift and C++ for image processing

CocoaHeads Lviv ep. 5



Link to slides

About me

<https://www.goodreads.com/user/show/38693364-olha>

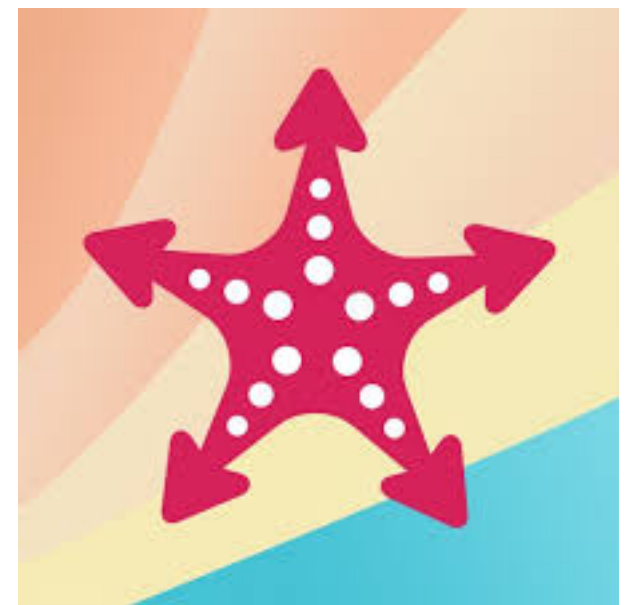
Software engineer @ ADVA Soft



HandyPhoto



TR...



About my company



HandyPhoto



TR...



Topics we'll discuss



AVFoundation



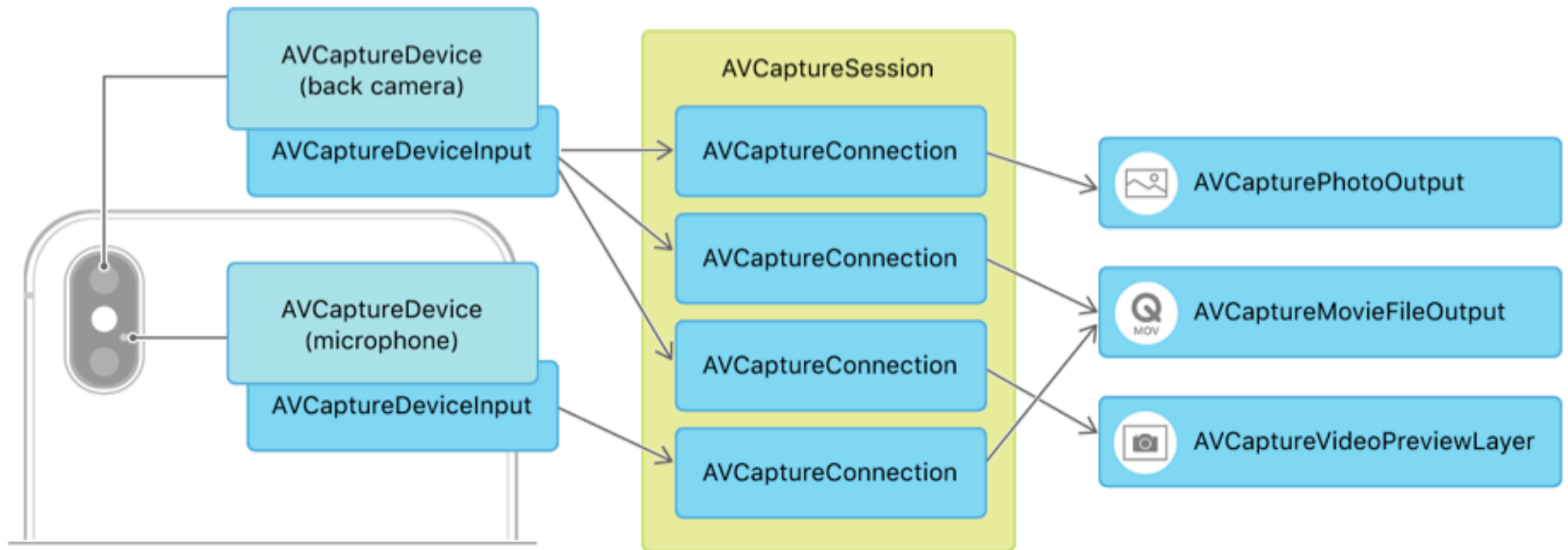
Why find edges?

Let's build custom camera!!!!

It will detect edges

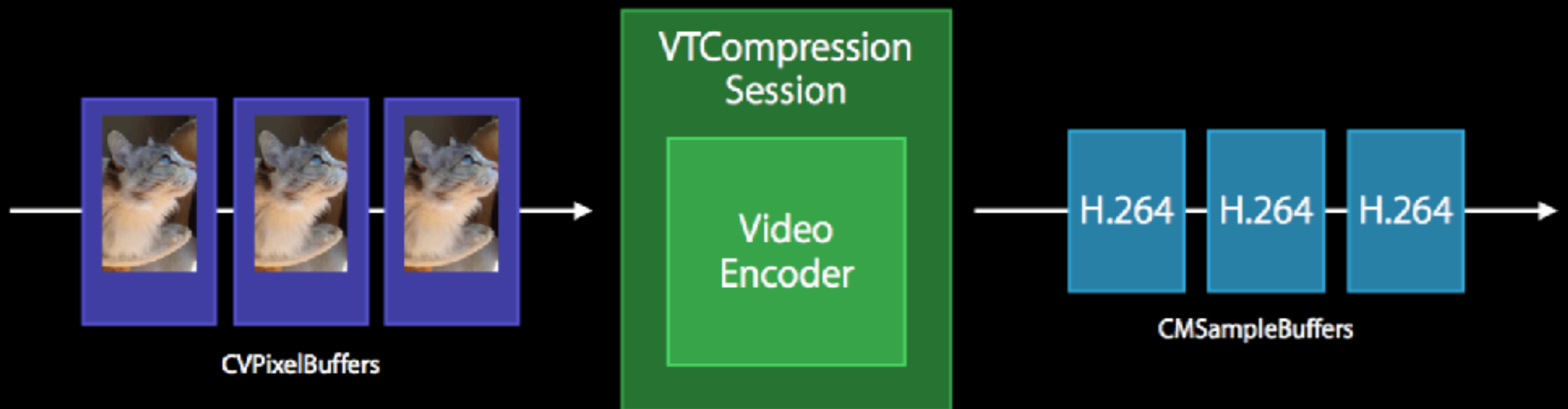
It can be used for

AVFoundation: write your custom Camera

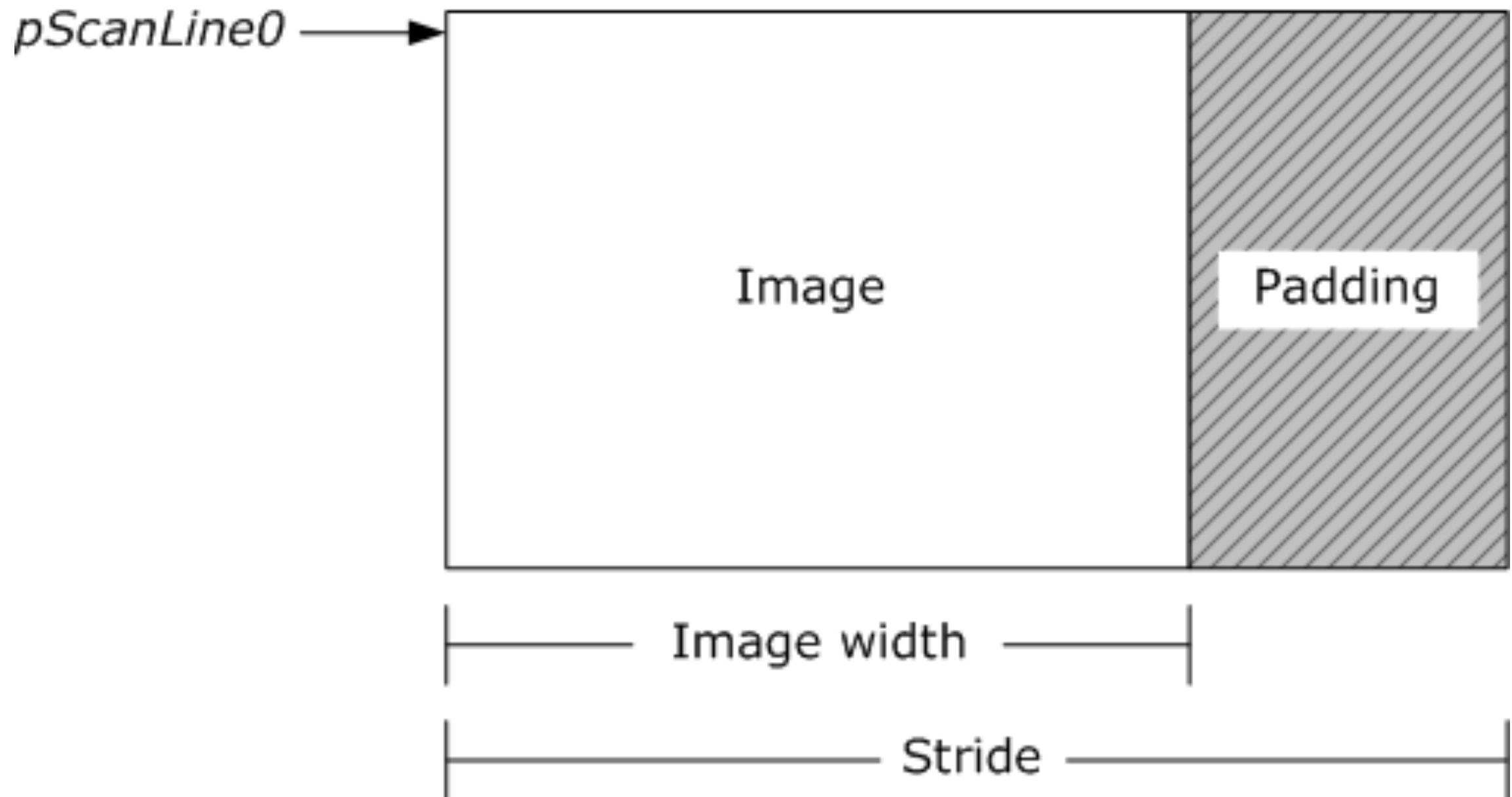


```
class AVSampleBufferDisplayLayer : CALayer
```

AVFoundation: write your custom Camera



CVPixelBuffer memory layout (RGBA/BGRA)



Time for demo :)

C++ integration

It's all about the bytes

Unmanaged, unsafe ptr

Real-time processing

- 1. Let's set R component to zero**
- 2. Let's use OpenCV**

OpenCV basics

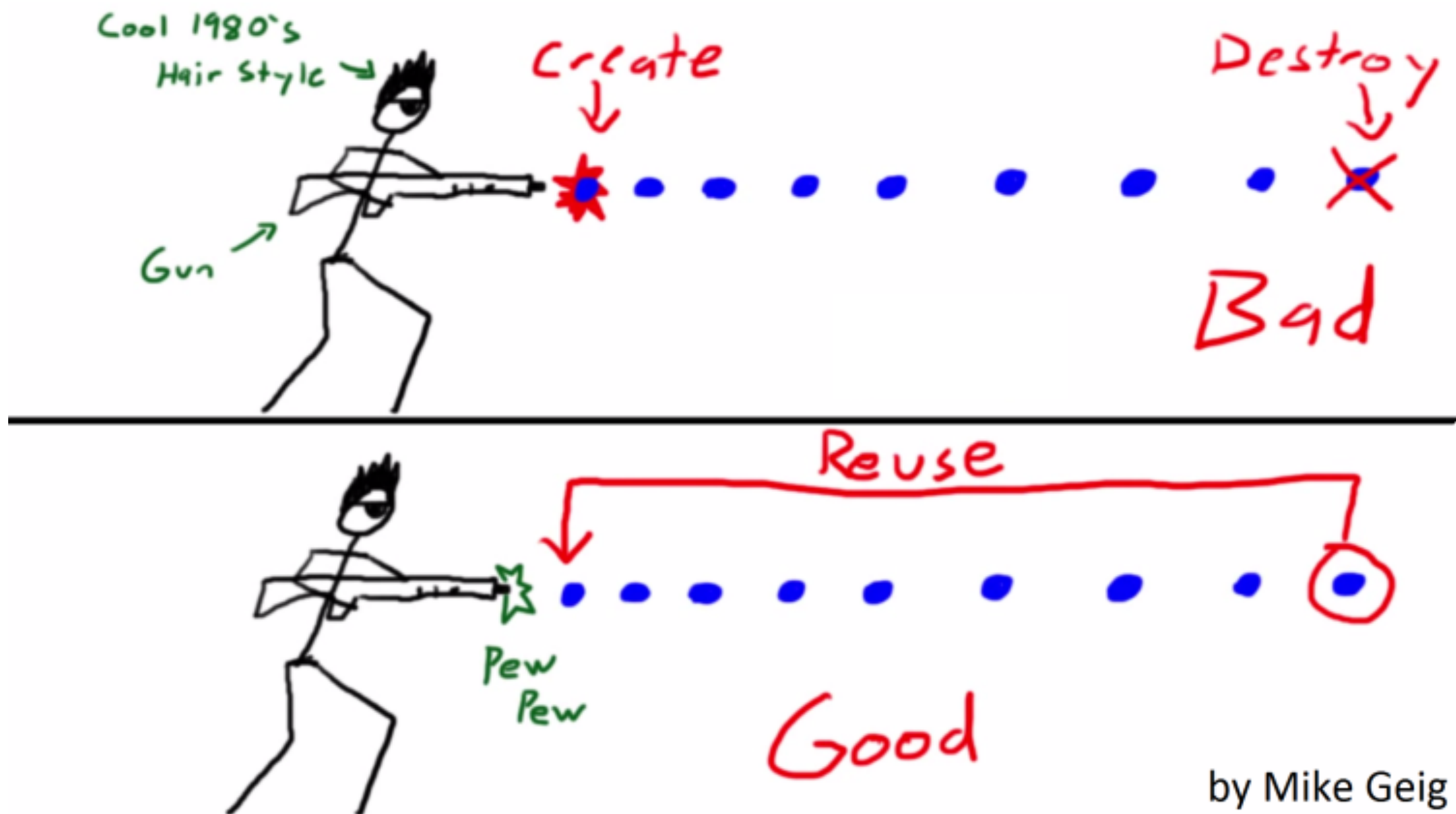
OpenCV functions we'll use

Time for OpenCV :)

Real-time solution #1: retain pixel buffer

Real-time solution #2: copy pixel buffer

Visual Example of Object Pooling



by Mike Geig

Experiment with parameters

Canny, maybe others

Conclusions

Feedback